



ACADEMIC AFFAIRS

May 15, 2020

**BACHELOR OF FINE ARTS
FILM PRODUCTION**

REQUEST: Approval of a Bachelor of Fine Arts (BFA) in Film Production through the School of Media within Potter College of Arts and Letters.

FACTS: The BFA in Film Production is a pre-professional major providing an immersive, conservatory-style educational experience for students pursuing a career in the film industry. Hands-on instruction in pre-production (writing, producing), production (directing, cinematography, production design), and post-production (editing, sound, visual effects) provides students foundational concepts and practical skills which are reinforced through their work on short films. Film studies courses emphasize critical and analytical thinking through the study of global film culture, history, and aesthetics.

BFA in Film Production students will rotate through “below the line” (technical) and “above the line” (creative) roles on two short film production cycles, leading to a final thesis film cycle where seniors choose an area of emphasis (directing, cinematography, producing, production design, editing, sound). By the time of their graduation, every BFA in Film Production student will be ready to enter the workplace with nearly 30 student film credits for their resume.

Students seeking the BFA in Film Production must take 12 hours of film core curriculum their first year and submit to a portfolio review their second semester. Twenty-four students will be selected per year for admission into the program. After admission, students follow a prescribed class schedule to ensure completion of the program in four years. The BFA in Film Production does not allow for a minor or second major.

BUDGETARY IMPLICATIONS: An additional full-time faculty has been approved by the Provost and funded by WKU's Strategic Investment Fund. Implementation date will be Fall 2020.

RECOMMENDATION & IMPLEMENTATION DATE: President Timothy C. Caboni recommends approval of the Film Production major leading to the Bachelor of Fine Arts with implementation Fall 2020.

MOTION: Approval to establish a major in Film Production effective Fall 2020.

Potter College of Arts & Letters
School of Media
Proposal to Create a New Major
(Action Item)

Contact Person: Travis Newton, Film Program Coordinator and Associate Professor of Film
travis.newton@wku.edu

1. Identification of program:

1.1 **Program title:** Film Production (Bachelor of Fine Arts)

1.2 **Required hours in program:** 81 hours

1.3 **Special information:** In AY 2018-2019, Western Kentucky University undertook a campus-wide Comprehensive Academic Program Evaluation (CAPE) assessing all academic programs on campus. The BA in Film major was one of fifteen academic programs to receive a Grow/Enhance recommendation. As a way to support these Grow/Enhance programs, the university has set aside funding in its new Resource Allocation, Management, and Planning (RAMP) budgeting model for a Strategic Investment Fund. This Fund will support a new full-time, tenure-track film faculty line with a specialization in the area of Production Design, covering courses in the proposed BFA in Film Production, as well as the current BA in Film.

1.4 **Catalog description:** The BFA in Film Production is a pre-professional major providing an immersive, conservatory-style educational experience for students pursuing a career in the film industry. Hands-on instruction in pre-production (writing, producing), production (directing, cinematography, production design), and post-production (editing, sound, visual effects) provides students foundational concepts and practical skills which are reinforced through their work on short films. Film studies courses emphasize critical and analytical thinking through the study of global film culture, history, and aesthetics.

BFA in Film Production students will rotate through “below the line” (technical) and “above the line” (creative) roles on two short film production cycles, leading to a final thesis film cycle where seniors choose an area of emphasis (directing, cinematography, producing, production design, editing, sound). By the time of their graduation, every BFA in Film Production student will be ready to enter the workplace with nearly 30 student film credits for their resume.

Students applying for the BFA in Film Production must take 12 hours of Film core curriculum their first year (FILM 100, 201, 202, and 250) and submit to a portfolio review during their second semester. Twenty-four students per academic year will be selected for admission into the program based on the quality of their creative portfolio, their professionalism in class and on set, and their scholastic work. After admission, students must follow a prescribed class schedule to ensure completion of the program in four years (including the first year of core courses).

The BFA in Film Production requires 81 semester hours. No course with a grade of “D” or below may be counted toward this major or fulfill prerequisite requirements for any major in the School of Media. The BFA in Film Production does not allow for a minor or second major.

In addition to a portfolio review, students applying for the BFA in Film Production must meet the following academic requirements:

1. Completion of a minimum of 30 hours of coursework applicable to a baccalaureate degree;
2. A minimum overall grade point average of 2.5;
3. Completion of ENG 100 with a grade of 'C' or better and 15 additional hours in the Colonnade Program;
4. Completion of the following courses with a grade of 'C' or better: FILM 100, FILM 201, FILM 202, FILM 250.

Students who are not selected for the BFA in Film Production or opt-out of the application process will have the option of pursuing the BA in Film if they meet the BA in Film's admission requirements.

1.5 **Classification of Instructional Program Code (CIP): 50.0602**

2. **Learning outcomes of the proposed program:**

Upon completion of the BFA in Film Production, students will be able to:

- Demonstrate technical proficiency in the below-the-line (technical) areas of camera, lighting, grip, sound, script supervising, and assistant directing.
- Develop visual storytelling proficiency in the above-the-line (creative) areas of writing, directing, producing, cinematography, production design, and editing.
 - Prepare a post-graduation employment plan based on an understanding of the film industry in both studio (Hollywood) and independent film production.
 - Evaluate films or solve production problems in an organized, coherent fashion using critical thinking and problem-solving skills.
 - Communicate effectively, orally and through the written word, on a film set or other professional setting that requires visual storytelling.
 - Manage a team or collaborate effectively as a team member, on a film set or other professional setting that requires visual storytelling.

3. **Rationale:**

- 3.1 **Reason for developing the proposed certificate program:** In order to gauge interest for a BFA in Film Production, an online survey was conducted via Qualtrics among current WKU film students and film alumni. Support among both groups for a BFA in Film Production was overwhelmingly positive. Of the 74 current students who responded, 85% (n=63) said they would have chosen a BFA in Film Production if it were an option when they arrived at WKU. Of the 28 alumni responses, 86% (n=24) answered similarly. Sixty-two percent (n=46) of student respondents said they would apply for the BFA in Film Production if it becomes available. Most tellingly, 57% (n=42) of current students and 50% (n=14) of alumni said they would have chosen a Kentucky university *other than WKU* if it had offered a BFA in Film Production. There is clearly a desire among students seeking an undergraduate degree in film for a BFA in Film Production.

- 3.2 Relationship of the proposed program to other programs now offered by the department:** The BFA in Film Production will be offered alongside WKU's BA in Film production. The BFA in Film Production will be an intensive pre-professional program which gives students numerous opportunities to make films without taking non-film courses concurrently. This option would be good for a student pursuing a career in the film/television industry in narrative filmmaking. The BA in Film is an open-ended liberal arts program giving students a wide breadth of knowledge through film electives and minor/double major options. This option would be good for a student who has a general interest in film, wants the option of double majoring, or intends to continue on to graduate school. Since many arts programs (including WKU's own Visual Art, Performing Arts, and Music programs), offer both degree types (pre-professional and liberal arts), there is precedent for the two programs to coexist at the same university.
- 3.3 Relationship of the proposed program to programs offered in other departments:** None
- 3.4 Projected enrollment in the proposed program:** 24-72 students
- 3.5 Similar programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):** None with the same CIP code.

The BFA in Film Production will take four years to complete due to its lock-step scheduling and selective-entry cohort, so any student wishing to transfer to WKU to pursue the BFA in Film Production must bear this in mind. Transfer students wishing to complete a film degree in the 2+2 year model would be better served by choosing WKU's BA in Film degree, which is being revised to allow completion in two years.

However, WKU's film faculty is in early discussions with Bluegrass Community & Technical College to allow graduates of their AFA in Digital Cinematic Arts to bypass the introductory first year of classes and move directly into the first year of the BFA, assuming they are admitted into the program. They could then complete the BFA in Film Production in six semesters. As of October 2019, no articulation agreements have been drafted.

Relationship of the proposed certificate program to the university mission and objectives: The BFA in Film Production is designed to support the following aspects of WKU's strategic plan "Climbing to Greater Heights":

A Culture of Innovation

The BFA in Film Production prepares students to be productive, engaged, and socially responsible citizens through its two-pronged emphasis on film production and film studies. In production courses, students use the latest technology in a collaborative, immersive environment to learn technical and creative skills necessary to tell stories in a visual medium, skills that will make them employable should they choose to pursue filmmaking as a profession.

A Regional Lighthouse

In addition, students learn essential problem-solving, teamwork, and leadership skills necessitated by the collaborative process of filmmaking. No team can succeed without clear goals, structure, and communication, and production courses emphasize these "soft skills" as strongly as technical skills. BFA

in Film Production students interact with the community through location filming around south central Kentucky and public showcases of student work on campus.

Global Learning

Film studies courses, including world cinema, expose students to cultures and filmmakers from diverse backgrounds from around the world while encouraging students to be engaged and aware of how their own films contribute to the cultural conversation. Students develop strong writing, research, and critical thinking skills, while engaging with an art form that crosses cultural and national boundaries.

The BFA in Film Production is also designed to support the following objectives of Kentucky’s postsecondary education strategic agenda:

Career Readiness and Employability (Objective 9)

Through its emphasis on technical and creative skills, professional practices and equipment, as well as critical thinking and problem solving, the BFA in Film Production ensures students are prepared and attractive to potential employers. As more film productions choose to film in Kentucky due to its competitive tax incentives, it is imperative the state have a local workforce ready to greet them. With its extensive film production courses and focus on professional practices, the BFA in Film Production is designed to build such a workforce.

Increase Persistence and Timely Completion (Objective 6)

By design, students who enroll in the BFA in Film Production as freshmen will complete their degree in four years. This timely completion is made possible by the major’s “lock-step” curriculum, which ensures classes are taken in a prescribed progression and at a pre-assigned time in the student’s undergraduate career. In addition, students move through the program as a cohort, thereby increasing their chances for persistence and completion.

4. Curriculum:

Prefix & Number	Course Title	Credit Hours
FILM 100	Film Industry & Aesthetics	3
FILM 201	Introduction to Cinema	3
FILM 202	Basic Film Production	3
FILM 250	Screenwriting I	3
FILM 251	Film Directing I	2
FILM 252	Film Producing	2
FILM 253	Cinematography I	2
FILM 254	Production Design I	2

FILM 255	Film Sound	2
FILM 274	Film Editing I	3
FILM 289	Practicum: Pre-Production I	2
FILM 291	Practicum: Below-the-Line I	3
FILM 292	Practicum: Above-the-Line I	3
FILM 350	Screenwriting II	2
FILM 351	Film Directing II	2
FILM 353	Cinematography II	2
FILM 354	Production Design II	2
FILM 365	Film Genres	2
FILM 369	Introduction to World Cinema	3
FILM 374	Film Editing II	2
FILM 389	Practicum: Pre-Production II	3
FILM 391	Practicum: Below-the-Line II	3
FILM 392	Practicum: Above-the-Line II	3
FILM 394	Practicum: Post-Production I	3
FILM 466	Film Theory	3
FILM 486	Film Capstone	3
FILM 488	Thesis Development	3
FILM 489	Practicum: Pre-Production III	3
FILM 491	Practicum: Below-the-Line III	3
FILM 492	Practicum: Above-the-Line III	3
FILM 494	Practicum: Post-Production II	3

5. **Budget implications:** An additional full-time faculty has been approved by the Provost and funded by WKU's Strategic Investment Fund.
6. **Proposed term for implementation:** Fall 2020

7. Dates of prior committee approvals:

Committee	Date
School of Media	11/6/2019
PCAL Undergraduate Curriculum Committee	11/19/2019
Undergraduate Curriculum Committee	12/10/2019
University Senate	02/20/2020
Provost	03/03/2020
Board of Regents	

PRE-PROPOSAL FOR NEW ACADEMIC PROGRAM

Western Kentucky University

Institution Submitting Proposal

Bachelor of Fine Arts

Program Type

BFA in Film Production

Title of Proposed Degree Program

Undergraduate

Degree Level

EEO Status

CIP Code

50.0602

Academic Unit (e.g. Department, Division, School)

School

Name of Academic Unit

School of Media

Name of Program Director

Dr. Robert Dietle

Date of pre-proposal

End of review period

Intended Date of Implementation

Fall 2020

Name, Title and Information of Contact Person

Travis Newton

Film Program Coordinator

Associate Professor of Film

travis.newton@wku.edu

Is this program a pre-baccalaureate certificate or diploma program? **No**

- If YES, is the program Technical/Occupational/Vocational
- Please provide documentation that this program was approved by the KCTCS Board of Regents\

A. Centrality to the Institution’s Mission and Consistency with State’s Goals

1. Provide a brief description of the program.

a. Does this program have any specializations? No

The BFA in Film Production is a pre-professional major providing an immersive, conservatory-style educational experience for students pursuing a career in the film industry. Hands-on instruction in pre-production (writing, producing), production (directing, cinematography, production design), and post-production (editing, sound, visual effects) provides students foundational concepts and practical skills which are reinforced through their work on short films. Film studies courses emphasize critical and analytical thinking through the study of global film culture, history, and aesthetics.

BFA in Film Production students will rotate through “below the line” (technical) and “above the line” (creative) roles on two short film production cycles, leading to a final thesis film cycle where seniors choose an area of emphasis (directing, cinematography, producing, production design, editing, sound). By the time of their graduation, every BFA in Film Production student will be ready to enter the workplace with nearly 30 student film credits for their resumé.

Students seeking the BFA in Film Production must take 12 hours of film core curriculum their first year and submit to a portfolio review their second semester. Twenty-four students will be selected per year for admission into the program. After admission, students follow a prescribed class schedule to ensure completion of the program in four years. The BFA in Film Production does not allow for a minor or second major.

2. What are the objectives of the proposed program?

- 1) To ensure students are prepared and attractive to potential employers in the film industry, or wherever visual storytelling skills are needed, through emphasis on technical and creative skills, professional practices and equipment, as well as critical thinking and problem solving.
- 2) To build a workforce for film productions choosing to film in Kentucky due to its competitive tax incentives.
- 3) To produce competitive student resumé and portfolios, as well as increase their professional exposure through regional/national film festival screenings and award competitions.
- 4) To expose students through film studies courses to cultures and filmmakers from diverse backgrounds from around the world while encouraging students to be engaged and aware of how their own films contribute to the cultural conversation.

3. Explain how the objectives support the institutional mission and strategic priorities, and the statewide postsecondary education strategic agenda.

The BFA in Film Production is designed to support the following aspects of WKU’s strategic plan “Climbing to Greater Heights”:

A Culture of Innovation

The BFA in Film Production prepares students to be productive, engaged, and socially responsible citizens through its two-pronged emphasis on film production and film studies. In production courses,

students use the latest technology in a collaborative, immersive environment to learn technical and creative skills necessary to tell stories in a visual medium, skills that will make them employable should they choose to pursue filmmaking as a profession.

A Regional Lighthouse

In addition, students learn essential problem-solving, teamwork, and leadership skills necessitated by the collaborative process of filmmaking. No team can succeed without clear goals, structure, and communication, and production courses emphasize these “soft skills” as strongly as technical skills. BFA in Film Production students interact with the community through location filming around south central Kentucky and public showcases of student work on campus.

Global Learning

Film studies courses, including world cinema, expose students to cultures and filmmakers from diverse backgrounds from around the world while encouraging students to be engaged and aware of how their own films contribute to the cultural conversation. Students develop strong writing, research, and critical thinking skills, while engaging with an art form that crosses cultural and national boundaries.

The BFA in Film Production is also designed to support the following objectives of Kentucky’s postsecondary education strategic agenda:

Career Readiness and Employability (Objective 9)

Through its emphasis on technical and creative skills, professional practices and equipment, as well as critical thinking and problem solving, the BFA in Film Production ensures students are prepared and attractive to potential employers. As more film productions choose to film in Kentucky due to its competitive tax incentives, it is imperative the state have a local workforce ready to greet them. With its extensive film production courses and focus on professional practices, the BFA in Film Production is designed to build such a workforce.

Increase Persistence and Timely Completion (Objective 6)

By design, students who enroll in the BFA in Film Production as freshmen will complete their degree in four years. This timely completion is made possible by the major’s “lock-step” curriculum, which ensures classes are taken in a prescribed progression and at a pre-assigned time in the student’s undergraduate career. In addition, students move through the program as a cohort, thereby increasing their chances for persistence and completion.

4. Is an approval letter from Education Professional Standards Board (EPSB) required? No

B. Program Quality and Student Success

1. What are the intended student learning outcomes of the proposed program?

Upon completion of the BFA in Film Production, students will be able:

- 1) To demonstrate technical proficiency in the below-the-line (technical) areas of camera, lighting, grip, sound, script supervising, and assistant directing.
- 2) To demonstrate visual storytelling proficiency in the above-the-line (creative) areas of writing, directing, producing, cinematography, production design, and editing.

- 3) To prepare a post-graduation employment plan based on an understanding of the film industry in both studio (Hollywood) and independent film production.
- 4) To evaluate films or solve production problems in an organized, coherent fashion using critical thinking and problem-solving skills.
- 5) To communicate effectively, orally and through the written word, on a film set or other professional setting that requires visual storytelling.
- 6) To manage a team or collaborate effectively as a team member, on a film set or other professional setting that requires visual storytelling.

2. How will the program support or be supported by other programs within the institution?

The BFA in Film Production is housed within the School of Media, which is also home to the current BA in Film. Students wishing to pursue either major will take the same 12 hours of Film core curriculum their first year. These introductory courses emphasize basic competencies in the areas of film production, film studies, and screenwriting.

The majority of film studies courses are taught within the Department of English. This interdisciplinary partnership has been a cornerstone of the film program since its inception. Faculty members in the Department of English provide necessary instruction in the areas of film analysis and critical studies. In addition, the School of Media is exploring ways to collaborate with the Department of Art and its burgeoning Computer Animation program, since both disciplines focus on visual storytelling and the technology used in computer animation can also be used for visual effects in live-action films.

3. Will this program replace or enhance any existing program(s) or tracks, concentrations, or specializations within an existing program?

The BFA in Film Production will be offered alongside WKU's BA in Film production. The BFA in Film Production will be an intensive pre-professional program which gives students numerous opportunities to make films without taking non-film courses concurrently. This option would be good for a student pursuing a career in the film/television industry in narrative filmmaking. The BA in Film is an open-ended liberal arts program giving students a wide breadth of knowledge through film electives and minor/double major options. This option would be good for a student who has a general interest in film, wants the option of double majoring, or intends to continue on to graduate school. Since many arts programs (including WKU's own Visual Art, Performing Arts, and Music programs), offer both degree types (pre-professional and liberal arts), there is precedent for the two programs to coexist at the same university.

4. Will this be a 100% distance learning program? No

5. Will this program utilize alternative learning formats (e.g. distance learning, technology-enhanced instruction, evening/weekend classes, accelerated courses)?

- Accelerated courses (bi-terms)
- Instruction at nontraditional locations (practicum courses on filming locations)

6. Are new or additional faculty needed? Yes
- If yes, please provide a plan to ensure that appropriate faculty resources are available, either within the institution or externally, to support the program.
 - Note whether they will be full-time or part-time. Full-time

In AY 2018-2019, Western Kentucky University undertook a campus-wide Comprehensive Academic Program Evaluation (CAPE) assessing all academic programs on campus. The BA in Film major was one of fifteen academic programs to receive a Grow/Enhance recommendation. As a way to support these Grow/Enhance programs, the university has set aside funding in its new Resource Allocation, Management, and Planning (RAMP) budgeting model for a Strategic Investment Fund. This Fund will support a new full-time, tenure-track film faculty line with a specialization in the area of Production Design, covering courses in the proposed BFA in Film Production, as well as the current BA in Film.

7. Curriculum

- Explain how the curriculum achieves the program-level student learning outcomes by describing the relationship between the overall curriculum or the major curricular components and the program objectives.

Student Learning Outcome #1: Below-the-Line (Technical) Skills

These technical skills are the essential building blocks of working in film production. Beginning the second semester in Basic Film Production, students learn technical skills in below-the-line (crew) positions, as well as industry professional practices and set etiquette. Students hone these skills through classroom instruction and required lab hours.

Students demonstrate their competence in below-the-line skills through three cycles of film practicum courses which allow students to rotate through every technical position on their classmates' films. Students evaluate their peers in the areas of job performance, attitude, punctuality, reliability, and safety. A film production professor supervises the below-the-line practicums.

Student Learning Outcome #2: Above-the-Line (Creative) Skills

These creative skills are essential for successful visual storytelling. Beginning the first semester with Film Industry & Aesthetics, students learn the basics of visual storytelling through the study of composition, story structure, and script analysis. These skills are built upon in specialized courses, such as Screenwriting I & II, Directing I & II, Cinematography I & II, Editing I & II, etc. Students complete a series of exercises and assignments during class under faculty supervision or on their own in small teams.

Students demonstrate their competence in above-the-line skills through three cycles of film practicum courses which allow students to rotate through every major creative position on their classmates' films while working through the entire filmmaking process, from story pitch to finished film. Students receive faculty advisement from a professor specializing in the relevant position: director, cinematographer, editor, etc. These films are ultimately screened at an end of the year festival and submitted to film festivals and award competitions.

Student Learning Outcome #3: Film Industry Knowledge

Knowledge of the film industry is essential for successful student employment post-graduation. Students learn the basic "lay of the land" in Film Industry & Aesthetics, such as the modern studio system, talent representation, issues related to gender/race, etc. They also learn basic concepts in self-promotion, such

as resumés and reels, websites, networking, etc. These foundational concepts allow students to enhance their resumés and reels throughout the program and procure work or internships during the summers.

Students demonstrate their competence in the film industry during the Film Capstone course their final year. Students are expected to craft a post-graduation plan, such as potential employment opportunities, networking opportunities, monthly budgets and expenditures, etc. Class discussions and assignments are supplemented with in-person or Skype guest speakers.

Student Learning Outcome #4: Critical Thinking/Problem-Solving Skills

The ability to critically evaluate a film or solve a production problem in an organized, coherent fashion is essential for success on-set and in film studies. Since critical thinking and problem solving are the essence of filmmaking itself, students are expected to use these skills in every course in the BFA in Film Production. In film studies courses, students learn to think analytically about film from diverse backgrounds around the world. Students then, in turn, apply these analytical skills to their own completed films through peer-evaluation and feedback.

Making a film is, at its core, a series of problems that must be solved. From logistical problems, like finding an appropriate location or actor, to creative problems, like conveying the appropriate mood through lighting, students must successfully solve problems at every step of the process. In addition, in the “real world,” filmmakers must deal with the realities of budgets and schedules, so the film practicums simulate these problems by creating production parameters, such as limited runtimes, shooting days, or storage media. Students must find creative ways to tell their story while overcoming sometimes seemingly impassible problems.

Student Learning Outcome #5: Communication Skills

The ability to communicate effectively, orally and through the written word, is essential to success on set and in film studies, so it is emphasized throughout the entire curriculum. Starting with Intro to Cinema, students in film studies courses (World Cinema, Film Genres, Film Theory) learn to organize and communicate their thoughts through analytical papers and multimedia presentations. Since the world of film criticism has embraced forms like the video essay, students are also required to present their analytical work in a variety of mediums, such as video essays and blog posts.

In production courses emphasizing below-the-line skills, students learn to communicate within a rigid production structure through industry-standard protocols, such as walkie-talkie etiquette and chain-of-command. In production courses emphasizing above-the-line skills, such as the film practicums, students are expected to communicate their ideas to the faculty verbally and through the written word at every phase of the process. Students ultimately present a plan of action to the faculty in a formal presentation setting for each film they undertake. The faculty provide feedback on both the content and the delivery of these presentations to improve the students’ films and their presentation skills.

Student Learning Outcome #6: Teamwork/Leadership Skills

The ability to function as part of a team, or a team leader, is essential for success in film production. Filmmaking is collaborative in nature, so every course in the BFA in Film Production curriculum emphasizes this bedrock concept. However, since many incoming students have no background in film production or may have only worked on projects by themselves, collaboration is not a skill that comes naturally to them. Thankfully, the structure of a professionally-run film set provides an environment where students can learn teamwork and leadership by degrees.

Starting with Film Industry & Aesthetics, students work in “entry-level” positions, such as production assistant or art assistant on upperclassmen films. This allows them to observe the workings of a film set while serving an actual crew position. In Basic Film Production, students learn basic crew skills which they put to use on upperclassmen films in “skilled” positions, such as grip, camera assistant, or boom op. Ultimately, through content-area instruction and experience working on set, students are prepared to now serve in “head of department” positions, such as director, cinematographer, etc.

b. Please upload the curriculum including full course names and course descriptions (see Appendix A for curriculum table template).

See Appendix A.

C. Program Demand/Unnecessary Duplication

1. Provide justification and evidence to support the need and demand for this proposed program. Include any data on student demand; career opportunities at the regional, state, and national levels; and any changes or trends in the discipline that necessitate a new program.

a. Student Demand (explain how faculty and staff systematically gathered data, studied the data and estimated student demand for the program. Anecdotal evidence is not sufficient.)

In order to gauge interest for a BFA in Film Production, an online survey was conducted via Qualtrics among current WKU film students and film alumni. Support among both groups for a BFA in Film Production was overwhelmingly positive. Of the 74 current students who responded, 85% (n=63) said they would have chosen a BFA in Film Production if it were an option when they arrived at WKU. Of the 28 alumni responses, 86% (n=24) answered similarly. Sixty-two percent (n=46) of student respondents said they would apply for the BFA in Film Production if it becomes available. Most tellingly, 57% (n=42) of current students and 50% (n=14) of alumni said they would have chosen a Kentucky university *other than WKU* if it had offered a BFA in Film Production. There is clearly a desire among students seeking an undergraduate degree in film for a BFA in Film Production.

b. Career Opportunities

With the expansion of the film industry into new markets, such as online streaming, nearly all projections for job growth at the national, state, and regional level are positive. The positions listed below are considered “high skill” jobs, skills which the BFA in Film Production is designed to provide through its rigorous curriculum.

	Regional	Regional Growth Projections	State	State Growth Projections	National	National Growth Projections
Type of Job	Producers and Directors					
Average Wage	\$49,175	11.11%	\$50,632	8.30%	\$71,680	5.00%
# of Openings	45	50	1,068	1,157	152,400	159,600
Type of Job	Film and Video Editors and Camera Operators					
Average Wage	No data	No data	\$49,447	17.40%	\$58,990	11.00%

# of Openings	No data	No data	115	135	69,200	77,100
Type of Job	Writers and Authors (Screenwriters)					
Average Wage	No data	No data	\$48,181	4.20%	\$62,170	0.00%
# of Openings	No data	No data	1,217	1,268	123,200	123,100
Type of Job	Art Directors					
Average Wage	No data	No data	\$80,373	1.00%	\$92,780	1.00%
# of Openings	No data	No data	573	579	101,000	101,900
Type of Job	Broadcast and Sound Engineering Technicians					
Average Wage	\$35,186	6.67%	\$39,827	12.00%	\$43,660	8.00%
# of Openings	30	32	341	382	144,300	155,800
Type of Job	International Alliance of Theatrical Stage Employees (IATSE) Member*					
Average Wage	Crew member working television shows				\$84,000 + benefits	
	Crew member working 10 commercials per month				\$72,000 + benefits	
	Crew member working independent feature films				\$50,000 + benefits	

Sources:

National Data: [Bureau of Labor Statistics' Occupational Outlook Handbook](#)

Regional and State Data: [Kentucky Center for Statistics](#)

**Since state and national labor data does not reflect a large percentage of crew positions in the film and television industry and since most major motion pictures, television shows, and commercials are covered by union contracts, Peter Kurland, Business Agent for International Alliance Theatrical Stage Employees (IATSE) Local 492 (Nashville office for the film crew union), provided some additional data about union crew member salaries in the region.*

c. Change in Discipline N/A

2. Specify any distinctive qualities of the program.

As of Fall 2019, no university in Kentucky offers a Bachelor of Fine Arts film degree. This means any Kentucky student seeking a *pre-professional undergraduate degree in filmmaking* must look out-of-state for their undergraduate education. Although a small group of Kentucky universities, including WKU, offer baccalaureate film programs (WKU's and Campbellsville's *BA in Film*, Asbury's *BA in Media Communication, Film Production emphasis*), these programs are liberal arts degrees by design, requiring a minor, second major, or significant elective credits for graduation. Since film production is as much a technical enterprise as it is creative, students wishing to enter the film industry would benefit from the enhanced focus and extended coursework provided by a Bachelor of Fine Arts in Film Production.

3. If similar programs exist (*the systems will populate a table based on CIP code*),
- Does the proposed program differ from existing programs in terms of curriculum, focus, objectives, etc.? If yes, please explain.
 - Does the proposed program serve a different student population (i.e., students in a different geographic area, non-traditional students) from existing programs? If yes, please explain.
 - Is access to existing programs limited? If yes, please explain.
 - Is there excess demand for existing similar programs? If yes, please explain.

Similar Program 1:

Institution: Asbury University
CIP Code: 50.0602

Program Name: MFA in TV and Film Production

a. **Comparison of Objectives/Focus/Curriculum to Similar Programs:** No information available about the MFA program on Asbury's website.

b. **Comparison of Student Populations:** WKU's BFA in Film Production does not overlap student populations because it is targeted solely at an undergraduate student population, whereas the Asbury's MFA is targeted at a graduate student population. According to the CPE program inventory, the MFA program is a hybrid face-to-face / distance learning program. WKU's BFA in Film Production is a 100% face-to-face program.

c. **Access to Existing Programs:** The Masters in TV and Film Production at Asbury University cannot reach WKU's BFA target population because it is targeted for students who have already completed a baccalaureate degree.

d. **Excess Demand:** No

Similar Program 2:

Institution: Bluegrass Comm. & Tech. College
CIP Code: 50.0602

Program Name: AFA in Digital Cinematic Arts

a. **Comparison of Objectives/Focus/Curriculum to Similar Programs:** While BCTC's Associate of Fine Arts in Digital Cinematic Arts and WKU's BFA in Film Production share similar objectives (both emphasize hands-on, project-based learning of filmmaking), WKU's BFA in Film Production is over twice as many credit hours culminating in a baccalaureate degree. This allows for more hands-on experience over an extended period of time, ultimately culminating in an area of expertise (directing, cinematography, editing, etc.)

b. **Comparison of Student Populations:** WKU's BFA in Film Production does not overlap student populations because it is targeted solely at a student population pursuing a baccalaureate degree, whereas the AFA is targeted at students seeking a two-year degree. According to the CPE program inventory, the AFA in Digital Cinematic Arts is a hybrid face-to-face / distance learning program. WKU's BFA in Film Production is a 100% face-to-face program.

c. **Access to Existing Programs:** Students who complete BCTC's AFA degree could elect continue their studies in WKU's current BA in Film or the proposed BFA in Film Production. A transfer student who has already completed their general education requirements could complete the BA in Film in two years.

BCTC AFA students seeking the BFA in Film Production would require a three-year commitment to complete the degree.

d. Excess Demand: No

Similar Program 3:

Institution: Western Kentucky University
CIP Code: 09.0701

Program Name: BA in Film

a. **Comparison of Objectives/Focus/Curriculum to Similar Programs:** Although they share a common core curriculum, the BFA in Film Production is designed for students pursuing a career in the film/television industry in narrative filmmaking. The BA in Film would be ideal for students who have a general interest in film, want the option of double majoring, or intend to continue on to graduate school.

b. **Comparison of Student Populations:** Students wishing to pursue either the BFA in Film Production or the BA in Film will take the same film core curriculum courses their first year.

c. **Access to Existing Programs:** Students must apply for entry into the BFA in Film Production. Students who are not selected for the BFA or opt out of the application process will have the option of pursuing the BA in Film.

d. Excess Demand: No

Similar Program 4:

Institution: Asbury University
CIP Code: 09.0799

Program Name: BA in Media Communication

a. **Comparison of Objectives/Focus/Curriculum to Similar Programs:** Like WKU's own BA in Film, Asbury's BA in Media Communication, Film Production emphasis is a liberal arts degree by design. The total number of credit hours (50) in the Media Communication program requires students choose multiple general electives to complete their graduation requirements. WKU's BFA in Film Production (81 credit hours) does not require general electives and gives students a concentrated study of filmmaking across their entire academic career.

b. **Comparison of Student Populations:** Although Asbury's BA in Media Communication and WKU's BFA in Film Production seek to recruit from the same undergraduate population, many of these potential students will opt for a public university instead of a private, Christian university for any number of reasons, such as cost, religious affiliation, content restrictions, etc.

c. **Access to Existing Programs:** As mentioned above, many students will opt for a public university for a variety of reasons.

d. Excess Demand: No

4. **Describe how the proposed program will articulate with related programs in the state. It should describe the extent to which students transfer has been explored and coordinated with other institutions. Attach all draft articulation agreements.**

The BFA in Film Production will take four years to complete due to its lock-step scheduling and selective-entry cohort, so any student wishing to transfer to WKU to pursue the BFA in Film Production must bear this in mind. Transfer students wishing to complete a film degree in the 2+2 year model would be better served by choosing WKU's BA in Film degree, which is being revised to allow completion in two years.

However, WKU's film faculty is in early discussions with Bluegrass Community & Technical College to allow graduates of their AFA in Digital Cinematic Arts to bypass the introductory first year of classes and move directly into the first year of the BFA, assuming they are admitted into the program. They could then complete the BFA in Film Production in six semesters. As of October 2019, no articulation agreements have been drafted.

D. Cost and Funding of the Proposed Program

1. Estimate the level of new and existing resources that will be required to implement and sustain the program using the spreadsheet below (if amount other than \$0, an explanation/justification required).

A. Funding Sources, by year of program	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Total Resources Available from Federal Sources					
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Total Resources Available from Other Non-State Sources					
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
State Resources					
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Internal Allocation	0	0	0	0	0
Internal Reallocation	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Student Tuition					
New	253,101	506,202	759,303	759,303	759,303
Existing	614,452	614,452	614,452	614,452	614,452
Narrative Explanation/Justification:	<p>(New) Students accepted into the BFA in Film Production (24 per year) were multiplied by WKU's current yearly tuition rate minus mandatory student fees which must be allocated to units benefitting (\$10,802 tuition - 7% fees = \$10,046). Additionally, a proposed \$500 per year program fee covering course materials and equipment was assessed for each BFA student.</p> <p>(Existing) Students seeking admission (which WKU currently averages 60 with its current BA in Film) were multiplied by WKU's current yearly tuition rate minus mandatory student fees which must be allocated to units benefitting (\$10,802 tuition - 7% fees = \$10,046). Additionally, \$195 in course fees (\$65 x 3 courses) per year covering course materials and equipment were assessed for each seeking student.</p>				
TOTAL	\$867,553	\$1,120,654	\$1,373,755	\$1,373,755	\$1,373,755

B. Breakdown of Budget Expenses/ Requirements	1 st year	2 nd Year	3 rd Year	4 th Year	5 th Year
Staff: Executive, administrative, and managerial					
New	0	0	0	0	0
Existing	50610	50610	50610	50610	50610
Narrative Explanation/Justification:	The School of Media currently employs a school director (\$110,000/year) and an office coordinator (\$34,600/year). These positions carry an additional 40% in benefits. Since these positions serve four programs in the School of Media, the total yearly salary+benefits was divided by 4.				
Other Professional					
New	0	0	0	0	0
Existing	28350	28350	28350	28350	28350
Narrative Explanation/Justification:	The School of Media currently employs a student advisor (\$38,000/year) and a computer lab manager (\$43,000/year). These positions carry an additional 40% in benefits. Since these positions serve four programs in the School of Media, the total yearly salary+benefits was divided by 4.				
Faculty					
New	84000	84000	84000	84000	84000
Existing	324872	324872	324872	324872	324872
Narrative Explanation/Justification:	The School of Media currently employs four film faculty members: (\$65,688/year, \$60,180/year, \$53,604/year, \$52,579/year). These positions carry an additional 40% in benefits. An additional full-time faculty member (\$60,000/year + 40% benefits) has been approved by the Provost and funded by WKU's Strategic Investment Fund.				
Graduate Assistants					
New	0	0	0	0	0
Existing	0	0	0	0	0
Narrative Explanation/Justification:	N/A				
Student Employees					
New	4350	4350	4350	4350	4350
Existing	13050	13050	13050	13050	13050
Narrative Explanation/Justification for All Human Resources Expenses:	The School of Media currently employs 3 student workers (\$7.25/hour x 20 hours x 30 weeks) to manage the equipment room and production lab. The BFA in Film Production will require a fourth worker to manage the post-production hallway.				
Equipment and Instructional Materials					
New	35,000	32,000	30,000	35,000	30,000
Existing	3,000	3000	3000	3000	3000
Narrative Explanation/Justification:	The current BA in Film budgets \$1000/year for expendable materials, such as gels, tape, batteries, dry-erase markers, etc. Since the number of films produced in a year will triple, it is expected that these expendable costs will triple. Although the Film program has built up its equipment inventory over the years, the BFA will require an additional equipment package (camera, lighting, grip, sound). Since the package will not be needed until year four (when multiple shoots are happening simultaneously) it can be built up over time: Year One (Camera Accessories for current package), Year Two (Additional Lighting/Grip, and Sound Packages), Year Three (Additional Camera Package), Year Four (Additional Camera Accessories), Year Five (Editing Lab Computer Upgrade [splitting half of cost with Broadcasting program]).				

Library						
New	0	0	0	0	0	0
Existing	375	375	375	375	375	375
Narrative Explanation/Justification:	The School of Media's current library budget is \$1500/year. Since this budget is shared by four programs in the School of Media, it was divided by 4. This budget is sufficient for the BFA in Film Production's library needs. Additional funding is not required.					
Contractual Services						
New	2,479	2,479	2,479	2,479	2,479	2,479
Existing	5,324	5,324	5,324	5,324	5,324	5,324
Narrative Explanation/Justification	The School of Media currently licenses Adobe Creative Cloud, Avid Media Composer, and Avid Pro Tools post-production software through an annual subscription fee. Since this software is shared with the Broadcasting program in a 21 seat computer lab, the costs were assessed as follows: Creative Cloud (\$185.35/year x 21 / 2), Avid (\$83.62/year x 21 / 2), Pro Tools (\$85.32/year x 21 / 2). Additionally, the Film program subscribes to Final Draft screenwriting software for a 21 seat computer lab at a cost of \$1604/year (\$76.40 x 21). Additional editing computers have been designated for the BFA in Film Production. The year software subscription costs were calculated as follows: Creative Cloud (\$185.35/year x 7), Avid (\$83.62/year x 7), Pro Tools (\$85.32/year x 7).					
Academic and/or Student Services						
New	0	0	0	0	0	0
Existing	0	0	0	0	0	0
Narrative Explanation/Justification	The School of Media provides a student advisor for students prior to admittance into a SoM major. This cost has already been accounted for under Other Professional staff.					
Other Support Services						
New	0	0	0	0	0	0
Existing	0	0	0	0	0	0
Narrative Explanation/Justification	N/A					
Faculty Development						
New	0	0	0	0	0	0
Existing	6432	6432	6432	6432	6432	6432
Narrative Explanation/Justification :	The School of Media's current faculty development budget is \$25,729/year. Since this budget is shared by four programs in the School of Media, it was divided by 4. This budget covers faculty conference registration and travel costs, as well as advanced training opportunities such as workshops and masterclasses.					
Assessment						
New	0	0	0	0	0	0
Existing	0	0	0	0	0	0
Narrative Explanation/Justification	N/A					
Student Space and Equipment						
New	0	0	0	0	0	0
Existing	0	0	0	0	0	0
Narrative Explanation/Justification	For doctoral programs only. N/A					
Faculty Space and Equipment						
New	0	0	0	0	0	0

Existing	0	0	0	0	0
Narrative Explanation/Justification:	For doctoral programs only. N/A				
Other					
New	0	0	0	0	2500
Existing	0	0	0	0	0
Narrative Explanation/Justification:	The School of Media intends to seek accreditation of the BFA in Film Production program by the National Association of Schools of Art & Design (NASAD) accrediting body. By year five, enough students will have graduated to begin the accrediting process. NASAD charges \$500 in application fees and recommends budgeting \$1000 per evaluator (x2) for a site visit. There is potential to share this cost with the Department of Art, since they are also accredited by NASAD, which will also be due for accreditation in five years..				
TOTAL					
New	\$125,829	\$122,829	\$120,829	\$125,829	\$123,329
Existing	\$432,013	\$432,013	\$432,013	\$432,013	\$432,013

F. Program Assessment

- Describe how each program-level student learning outcome will be assessed and how assessment results will be used for improving the program. *(Explain which student learning outcome(s) will be assessed by each assessment method and how frequently each assessment method is administered. Include both direct and indirect methods. Explain how assessment results will be used to make improvements to the program. Note that this item refers to program-level, not course-level, assessment and thus course grades are not an appropriate source of data for program –level assessment).*

Student Learning Outcome #1: Below-the-Line (Technical) Skills

Direct Assessments: Students accepted into the BFA in Film Production will be administered a written pre-test about key Below-the-Line skill areas (camera, lighting, sound, etc.) and film industry knowledge (SLO #3). In the senior capstone class, a follow-up post-test will also be administered. During courses emphasizing below-the-line skills, students will be administered timed practical exams to demonstrate competency over key skill areas. Students will be expected to score at least a 90% to be considered competent to perform the skill on set unsupervised.

Indirect Assessments: Students evaluate their peers' work on set in the areas of job performance, attitude, punctuality, reliability, and safety via online feedback form. The results of this feedback is tabulated and distributed to the students anonymously for their own self-improvement, as well as retained by faculty for program assessment.

Student Learning Outcome #2: Above-the-Line (Creative) Skills

Direct Assessments: In order to be admitted into the BFA in Film Production, students must submit to a portfolio review in their second semester at WKU, which will assess via rubric the quality of their creative work created prior to and during their first academic year. At the end of each academic year, portfolios will be resubmitted and reevaluated to ensure the quality of student work is commensurate with their class status.

Indirect Assessments: The quality of student creative work will be assessed via rubric by their peers following the completion of each short film. In addition, students' films will be assessed by: 1) critical feedback their senior year from an outside advisory board of film professionals and 2) acceptance to

peer-reviewed film festivals or awards presentations, such as the Ohio Valley National Academy of Television Arts & Sciences Student Production Awards.

Student Learning Outcome #3: Film Industry Knowledge

Direct Assessments: Students accepted into the BFA in Film Production will be administered a written pre-test about key Below-the-Line skill areas (SLO #1) and the film industry. In the capstone class, a follow-up post-test will also be administered. As part of their annual portfolio review, students will be expected to submit updated professional materials, such as resumés and reels appropriate for the film industry.

Indirect Assessments: Exit interviews will be administered to evaluate students' understanding of the film industry and assess student professional readiness. Job placement rates and employer feedback will also be considered.

Student Learning Outcome #4, 5, & 6: Critical Thinking/Problem-Solving Skills, Communication Skills, Teamwork/Leadership Skills

Direct Assessments: As part of the portfolio review process required for admission into the program, students will be interviewed individually and as part of a group. The group interview will require students complete a creative task that will demonstrate their abilities to solve a problem, communicate, and collaborate as a team. The candidates will be scored via rubric, and the results will be used in the program admission process. Once admitted, the primary instrument for evaluating SLOs 4, 5, and 6 are formal production presentations for the faculty, where students are expected outline their plan for making their films, effectively communicating how they creatively solved the problems associated with their short film in a way that is collaborative, cohesive, and appropriate to the director's vision.

Indirect Assessments: Students evaluate their peers' work on set in the areas of job performance, attitude, punctuality, reliability, and safety via online feedback form. The results of this feedback is tabulated and distributed to the students anonymously for their own self-improvement, as well as retained by faculty for program assessment.

Course Mapping

SLO #1 Below-the-Line (Technical) Skills: FILM 202 (Introduced); FILM 291 (Developed); FILM 391 (Developed); FILM 491 (Mastered)

SLO #2 Above-the-Line (Creative) Skills: FILM 100 (Introduced); FILM 250, 251, 252, 253, 254, 255, 274, 289, 292 (Developed); FILM 350, 351, 353, 354, 374, 389, 392, 394 (Developed); FILM 488, 489, 492, 494 (Mastered)

SLO #3 Film Industry Knowledge: FILM 100 (Introduced); FILM 486 (Mastered)

SLO #4 Critical Thinking/Problem-Solving Skills: FILM 100, 201, 202 (Introduced); FILM 289, 291, 292 (Developed); FILM 365, 369, 389, 391, 392, 394 (Developed); FILM 466, 488, 489, 491, 492, 494 (Mastered)

SLO #5 Communication Skills: FILM 100, 201, 202 (Introduced); FILM 289, 291, 292 (Developed); FILM 365, 369, 389, 391, 392, 394 (Developed); FILM 466, 488, 489, 491, 492, 494 (Mastered)

SLO #6 Teamwork/Leadership Skills: FILM 100, 202 (Introduced); FILM 289, 291, 292 (Developed); FILM 389, 391, 392, 394 (Developed); FILM 488, 489, 491, 492, 494 (Mastered)

Appendix A: Curriculum for the Film Production program, BFA degree

Catalog Description

The BFA in Film Production is a pre-professional major providing an immersive, conservatory-style educational experience for students pursuing a career in the film industry. Hands-on instruction in pre-production (writing, producing), production (directing, cinematography, production design), and post-production (editing, sound, visual effects) provides students foundational concepts and practical skills which are reinforced through their work on short films. Film studies courses emphasize critical and analytical thinking through the study of global film culture, history, and aesthetics.

BFA in Film Production students will rotate through “below the line” (technical) and “above the line” (creative) roles on two short film production cycles, leading to a final thesis film cycle where seniors choose an area of emphasis (directing, cinematography, producing, production design, editing, sound). By the time of their graduation, every BFA in Film Production student will be ready to enter the workplace with nearly 30 student film credits for their resumé.

Students applying for the BFA in Film Production must take 12 hours of Film core curriculum their first year (FILM 100, 201, 202, and 250) and submit to a portfolio review during their second semester. Twenty-four students per academic year will be selected for admission into the program based on the quality of their creative portfolio, their professionalism in class and on set, and their scholastic work. After admission, students must follow a prescribed class schedule to ensure completion of the program in four years (including the first year of core courses).

The BFA in Film Production requires 81 semester hours. No course with a grade of “D” or below may be counted toward this major or fulfill prerequisite requirements for any major in the School of Media. The BFA in Film Production does not allow for a minor or second major.

In addition to a portfolio review, students applying for the BFA in Film Production must meet the following academic requirements:

1. Completion of a minimum of 30 hours of coursework applicable to a baccalaureate degree;
2. A minimum overall grade point average of 2.5;
3. Completion of ENG 100 with a grade of ‘C’ or better and 15 additional hours in the Colonnade Program;
4. Completion of the following courses with a grade of ‘C’ or better: FILM 100, FILM 201, FILM 202, FILM 250.

Students who are not selected for the BFA in Film Production or opt-out of the application process will have the option of pursuing the BA in Film if they meet the BA in Film’s admission requirements.

Program Core Courses (81 Credit Hours)				
Prefix & Number	Course Title	Course Description	Credit Hours	New (Yes or No)
FILM 100	Film Industry & Aesthetics	Introduction of the film industry and aesthetics of cinematic visual storytelling, considered from both studio and independent practitioners' perspectives.	3	No

FILM 201	Introduction to Cinema	A study of the basic elements and techniques of the film medium, designed to increase the students' understanding and appreciation of the motion picture both as a communication medium and as an art form. A number of film masterpieces will be viewed and analyzed. Lecture and lab.	3	No
FILM 202	Basic Film Production	Introduction to film production equipment and on-set crew positions. Practical, hands-on experience rotating through crew positions in a workshop setting.	3	No
FILM 250	Screenwriting I	A concentrated study in the fundamentals of screenwriting for narrative film; conflict, character, structure, plot, dialogue, and subtext. Emphasis on visual storytelling through short screenplays.	3	No
FILM 251	Film Directing I	Course provides students with a concentrated study in the fundamentals of directing for narrative film: script analysis, working with actors, rehearsal process, blocking camera, staging actors, editing. Emphasis on visual storytelling through short filmed projects.	2	Yes*
FILM 252	Film Producing	A concentrated study in the fundamentals of producing for film: developing ideas, script evaluation, fundraising, budgeting, scheduling, and production management. Emphasis on creative and managerial skills through short projects.	2	Yes*
FILM 253	Cinematography I	A concentrated study in the fundamentals of cinematography: capture/presentation formats, lighting, camera, exposure, and composition. Emphasis on visual storytelling through short filmed projects.	2	Yes*
FILM 254	Production Design I	A concentrated study in the fundamentals of production design for narrative film: color and shape, form, wardrobe, hair/make up, and set design/decoration. Emphasis on visual storytelling through short projects.	2	Yes
FILM 255	Film Sound	A concentrated study in the fundamentals of postproduction sound for narrative film: dialogue editing and audio restoration, sound design, ADR & foley, pre-dubbing, final mix/re-recording. Emphasis on visual storytelling through short projects.	2	Yes*
FILM 274	Film Editing I	A concentrated study in the fundamentals of editing for narrative film: evaluating footage, technical editing, continuity editing, audio editing, basic mixing, collaboration. Emphasis on visual storytelling through short projects.	3	Yes
FILM 289	Practicum: Pre-Production I	Intensive, practical, project-based experience in pre-production strategies for narrative (fiction) filmmaking. Emphasis on the practical application of pre-production skills, strategies, and best practices covered and developed in previous course offerings. Specific focus designed in consultation with instructor.	2	Yes

FILM 291	Practicum: Below-the-Line I	Intensive, practical, hands-on experience in film production as below-the-line crew. Emphasis on techniques and strategies developed in previous Basic Film Production course related to key departments of below-the-line crew. Specific focus designed in consultation with instructor.	3	Yes
FILM 292	Practicum: Above-the-Line I	Intensive, practical, project-based experience in production strategies, skills and techniques for narrative (fiction) filmmaking. Emphasis on the practical application of above-the-line production skills, strategies, and best practices covered and developed in previous course offerings. Specific focus designed in consultation with instructor.	3	Yes
FILM 350	Screenwriting II	An advanced study in the fundamentals of screenwriting for narrative film: conflict, character, structure, plot, dialogue, and subtext. Emphasis on visual storytelling through short screenplays.	2	Yes
FILM 351	Film Directing II	Course provides intermediate students with a concentrated study and implementation of directorial style for narrative film: evaluating various directorial styles of master filmmakers by analyzing the composite elements of style (mise-en-scene, cinematography, editing & sound) as they apply to the director's duties pre-to-postproduction. Emphasis on visual storytelling through short projects.	2	Yes
FILM 353	Cinematography II	A concentrated study in advanced cinematography: professional practices, lighting, camera techniques, and color grading. Emphasis on visual storytelling through short filmed projects.	2	Yes
FILM 354	Production Design II	A concentrated study in advanced production design for narrative film: professional practices, set construction, design for visual and special effects, and character design. Emphasis on visual storytelling through short projects.	2	Yes
FILM 365	Film Genres	A survey course covering the historical development, thematic and stylistic conventions, and cultural significance of critical film genres. Surveys representative films from several genres, i.e. film noir, Westerns, crime & gangster, thriller, horror, science fiction, romantic comedy, etc.	2	Yes
FILM 369	Introduction to World Cinema	Examines cinema in several regions including China, India, Europe, Middle East, Africa, and Latin America. Viewing of representative films accompanied by background readings on history/culture.	3	No
FILM 374	Film Editing II	A concentrated study in advanced editing techniques for narrative film: complex continuity editing, dialogue editing, cutting action and suspense, scene transitions, visual effects. Emphasis on visual storytelling through short projects.	2	Yes

FILM 389	Practicum: Pre-Production II	Intensive, practical, project-based experience in pre-production strategies for narrative (fiction) filmmaking. Emphasis on the practical application of pre-production skills, strategies, and best practices covered and developed in previous course offerings. Specific focus designed in consultation with instructor.	3	Yes
FILM 391	Practicum: Below-the-Line II	Intensive, practical, hands-on experience in film production as below-the-line crew. Emphasis on techniques and strategies developed in previous Basic Film Production and Below-the-Line I courses related to key departments of below-the-line crew. Specific focus designed in consultation with instructor.	3	Yes
FILM 392	Practicum: Above-the-Line II	Intensive, practical, project-based experience in production strategies, skills and techniques for narrative (fiction) filmmaking. Emphasis on the practical application of above-the-line production skills, strategies, and best practices covered and developed in previous course offerings. Specific focus designed in consultation with instructor.	3	Yes
FILM 394	Practicum: Post-Production I	Practical, hands-on experience in post-production, designed to facilitate the production of a 6- to 8-minute film during the student's junior year. Emphasis on techniques and strategies developed in previous Editing and Sound courses, related to visual and audio post-production. Specific focus designed in consultation with instructor.	3	Yes
FILM 466	Film Theory	Study of major theories of narrative film and related media; specific theories examined will include formalist, auteurist, historical, structuralist, psychoanalytical, and political. Will include viewing of selected films.	3	No
FILM 486	Film Capstone	A senior capstone experience synthesizing and assessing the complete field of study for film majors. Includes an exploration of career and graduate study opportunities.	3	No
FILM 488	Thesis Development	Collaborative pre-production experience, designed to facilitate the production of a 10- to 12-minute film during the student's senior year. Emphasis on techniques and strategies developed in previous Screenwriting and Producing courses, related to screenplay and project development. Specific focus designed in consultation with instructor.	3	Yes
FILM 489	Practicum: Pre-Production III	An advanced intensive, practical, project-based experience in pre-production strategies for narrative (fiction) filmmaking. Emphasis on the practical application of pre-production skills, strategies, and best practices covered and developed in previous course offerings. Specific focus designed in consultation with instructor.	3	Yes
FILM 491	Practicum: Below-the-Line III	Intensive, practical, hands-on experience in film production as below-the-line crew. Emphasis on	3	Yes

		techniques and strategies developed in previous Basic Film Production, Below-the-Line I, and Below-the-Line II courses related to key departments of below-the-line crew. Specific focus designed in consultation with instructor.		
FILM 492	Practicum: Above-the-Line III	An advanced intensive, practical, project-based experience in production strategies, skills and techniques for narrative (fiction) filmmaking. Emphasis on the practical application of above-the-line production skills, strategies, and best practices covered and developed in previous course offerings. Specific focus designed in consultation with instructor.	3	Yes
FILM 494	Practicum: Post-Production II	Intensive hands-on experience in post-production, designed to facilitate the production of a 10- to 12-minute film during the student's senior year. Emphasis on techniques and strategies developed in previous Editing and Sound courses, related to visual and audio post-production. Specific focus designed in consultation with instructor.	3	Yes

** These courses currently exist in the course catalog, but have been rewritten extensively requiring a new course proposal. The existing courses will ultimately be suspended making a one-to-one swap.*

Dates of Committee Approvals:

Committee	Date Approved
Film Faculty	
School of Media	
Potter College of Arts & Letters	
Undergraduate Curriculum Committee	
University Senate	
Board of Regents	

Current Selections
 Market National
 6-Digit CIP 50.0602

Program Scorecard: 50.0602 - Cinematography and Film/Video Prod

Q Program Search Box

Selections

Market

6-Digit CIP

Award Le...

CIP Title

4-Digit CIP

2-Digit CIP

Current P...

WKU Pro...

Program

Students:
 15-16: 0 16-17: 0 17-18: 0

Select year(s) for economics data:
 2015-2016 2016-2017 2017-2018

Select calculation type:
 Total Per SCH

GRAYASSOCIATES		Overall Score			16			Percentiles: < 40% 40%+ 70%+ 90%+ 95%+ 98%+				
Category	Criterion	Value	Score	Total	Category	Criterion	Value	Score	Total			
Student Demand	Inquiries	Total (12 months)	8,213	7	27	Job Postings* 	Total (12 months)	8,480	0	-12		
		Online (included in Total)	1,090				Year-over-Year Change (Units)	1,467	0			
		Year-over-Year Change (Units)	2,427	1			Year-over-Year Change (%)	20.9%	0			
		Year-over-Year Change (%)	41.9%	1			Job Postings per Graduate*	1.0	0			
	Google Search*	Total (3 months)	207,982	3		BLS*	Current Employment	62,084	0			
		Year-over-Year Change (Units)	44,716	2			Year-over-Year Change (%)	-2.0%	-2			
Year-over-Year Change (%)	27.4%	1	5-Year Historic Growth (CAGR)	2.7%			0					
Completions	Total (12 months)	8,237	10	5-Year Historic Growth (CAGR)			4.7%	0				
	Year-over-Year Change (Units)	531	2	10-Year Forecast CAGR			0.2%	0				
Year-over-Year Change (%)	7%	0	Annual Job Openings	6,343			0					
Competitive Intensity	Institutions	Campuses with Graduates**	260	3		Nat'l ACS* (Bachelors)	Job Openings per Graduate*	0.8	-1			
		Year-over-Year Change (Units)**	2	-1			Share of Generalist Employme...	21,834	0			
	Cost Per Inquiry	Average Cost per Inquiry**	\$48	-1	Share of Generalist Openings		2,071	2				
		Completions per 1,000 Pop**	0.11	0	10th-Percentile Wages		\$32,671	-5				
	Google Search*	Cost per Click**	\$13	0	Wages (Age < 30)		\$33,626	-2				
		Competition Index**	0.29	0	Wages (Age 30-60)		\$72,304	0				
	Program Size	Average Completions/Institution	32	0	% with Any Graduate Degree	17%	0					
		Median Completions/Institution	14	0	% with Masters	15%	0					
		Year-over-Year Change (Units)	-1	0	% with Doct/Prof Degree	2%	0					
		Year-over-Year Change (%)	-4%	0	% Unemployed (Age < 30)**	7%	-2					
	Nat'l Distance Education	Insts. with Program Online**	14	0	% Unemployed (Age 30-60)**	5%	-2					
		% of Institutions	5%	0	% in Direct Prep Jobs	20%	0					
Online Completions**		235	0	GE Wages - Assoc. & Cert	\$19,089	0						
% of Completions		3%	0	Placement Rate - Assoc. & Cert	69.8%	0						
Degree Fit	NHEBI Nat'l 2-Yr	Cost Index**	0.88	0	CIP Description							
		Student:Faculty Index	1.04	0	A program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the making and producing of films and videos. Includes instruction in theory of film, film technology and equipment operation, film production, film directing, film editing, cinematographic art, film audio, techniques for making specific types of films and/or videos, media technologies, computer image making, multi-media production, and the planning and management of film/video operations.							
	Completions	National Completions by Level	0	0								
Workforce	National Workforce Ed Attainment	0	0									

Award Level Breakdown by Source

No data to display

Inquiries and Completions				Job Postings (Market) - Edu Requested		BLS Workforce Educ. Attainment (Nat'l)	
Award Level	Inquiries (Market)	Completions (Market)	Completions (National)	Award Level	Minimum Education Requested	Award Level	Educational Attainment
Certificate	0%	16%	16%	High School/Certificate	24%	No College	7%
Associates	0%	11%	11%	Associates	20%	Some College	15%
Bachelors	95%	60%	60%	Bachelors	46%	Associates	7%
Masters	5%	13%	13%	Masters	21%	Bachelors	56%
Doctoral	0%	0%	0%	Doctoral	19%	Masters	12%
				Unspecified	46%	Doctoral	4%

Current Selections
 Market Kentucky
 6-Digit CIP 50.0602

Program Scorecard: 50.0602 - Cinematography and Film/Video Prod

GRAYASSOCIATES Overall Score **2** Percentiles: <40% 40%+ 70%+ 90%+ 95%+ 98%+

Program Search Box

Selections

Market
 Kentucky

6-Digit CIP
 Regional
 Service Region

Award Le...

CIP Title

4-Digit CIP

2-Digit CIP

Current P...

WKU Pro...

Program ▲ CAPE: Rec to Regents

Students:
 15-16: 0 16-17: 0 17-18: 0

Select year(s) for economics data:
 2015-2016 2016-2017 2017-2018

Select calculation type:
 Total Per SCH

Category	Criterion	Value	Score	Total	
Student Demand	Total (12 months)	76	7	11	
	Inquiries	7	1		
	Online (included in Total)	7	1		
	Year-over-Year Change (Units)	24	1		
	Year-over-Year Change (%)	46.2%	1		
	Google Search*	1,706	3		
	Year-over-Year Change (Units)	481	1		
Competitive Intensity	Total (3 months)	1,706	3	-9	
	Year-over-Year Change (%)	39.2%	1		
	Completions	1	0		
	Year-over-Year Change (Units)	-7	-2		
Degree Fit	Year-over-Year Change (%)	-86%	-1	0	
	Institutions	Campuses with Graduates**	1		3
	Year-over-Year Change (Units)**	0	0		
	Cost Per Inquiry	Average Cost per Inquiry**	\$49		-1
	Market Saturation	Completions per 1,000 Pop**	0.00		0
	Google Search*	Cost per Click**	512		0
	Competition Index**	0.32	0		
	Program Size	Average Completions/Institution	1		-4
		Median Completions/Institution	1		-4
		Year-over-Year Change (Units)	-7		-2
Year-over-Year Change (%)		-86%	-1		
Nat'l Distance Education	Insts. with Program Online**	14	0		
	% of Institutions	5%	0		
	Online Completions**	235	0		
% of Completions	3%	0			
NHEBI Nat'l 2-Yr	Cost Index**	0.88	0		
	Student:Faculty Index	1.04	0		
Completions	National Completions by Level	0	0		
Workforce	National Workforce Ed Attainment	0	0		

Category	Criterion	Value	Score	Total
Employment	Job Postings*	Total (12 months)	70	0
	burningglass	Year-over-Year Change (Units)	22	0
		Year-over-Year Change (%)	44.6%	0
		Job Postings per Graduate*	69.9	2
	BLS*	Current Employment	650	0
		Year-over-Year Change (%)	6.8%	0
		3-Year Historic Growth (CAGR)	5.4%	0
		5-Year Historic Growth (CAGR)	9.8%	0
		10-Year Forecast CAGR	0.8%	0
		Annual Job Openings	71	0
		Job Openings per Graduate*	71.1	2
		Share of Generalist Employme...	239	0
		Share of Generalist Openings	22	2
		10th-Percentile Wages	\$35,510	0
	Nat'l ACS* (Bachelors)	Wages (Age < 30)	\$33,626	-2
Wages (Age 30-60)		\$72,304	0	
% with Any Graduate Degree		17%	0	
% with Masters		15%	0	
% with Doct/Prof Degree		2%	0	
% Unemployed (Age < 30)**		7%	-2	
Nat'l Gainful Emp.	% Unemployed (Age 30-60)**	5%	-2	
	% in Direct Prep Jobs	20%	0	
	GE Wages - Assoc. & Cert	\$19,089	0	
Placement Rate - Assoc. & Cert	69.8%	0		

CIP Description

A program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the making and producing of films and videos. Includes instruction in theory of film, film technology and equipment operation, film production, film directing, film editing, cinematographic art, film audio, techniques for making specific types of films and/or videos, media technologies, computer image making, multi-media production, and the planning and management of film/video operations.

Award Level Breakdown by Source

No data to display

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
Certificate	0%	100%	16%
Associates	0%	0%	11%
Bachelors	97%	0%	60%
Masters	3%	0%	13%
Doctoral	0%	0%	0%

Job Postings (Market) - Edu Requested

Award Level	Minimum Education Requested
High School/Certificate	44%
Associates	33%
Bachelors	55%
Masters	30%
Doctoral	30%
Unspecified	27%

BLS Workforce Educ. Attainment (Nat'l)

Award Level	Educational Attainment
No College	7%
Some College	15%
Associates	7%
Bachelors	56%
Masters	12%
Doctoral	4%

PROPOSED PROGRAM SUMMARY

Institution: Western Kentucky University

Program Name: Film Production

Degree Designation: Bachelor of Fine Arts (BFA)

Program Description:

The BFA in Film Production is a pre-professional major providing an immersive, conservatory-style educational experience for students pursuing a career in the film industry. Hands-on instruction in pre-production (writing, producing), production (directing, cinematography, production design), and post-production (editing, sound, visual effects) provides students foundational concepts and practical skills which are reinforced through students' work on short films. Film studies courses emphasize critical and analytical thinking through the study of global film culture, history, and aesthetics.

BFA in Film Production students will rotate through "below the line" (technical) and "above the line" (creative) roles on two short film production cycles, leading to a final thesis film cycle where seniors choose an area of emphasis (directing, cinematography, producing, production design, editing, sound). By the time of their graduation, every BFA in Film Production student will be ready to enter the workplace with nearly 30 student film credits for their resumé.

Students seeking the BFA in Film Production must take 12 hours of film core curriculum their first year and submit to a portfolio review their second semester. Twenty-four students will be selected per year for admission into the program. After admission, students follow a prescribed class schedule to ensure completion of the program in four years. The BFA in Film Production does not allow for a minor or second major.

CIP Code: 50.0602

Credit Hours: 81

(Tentative) Institutional Board Approval Date: 3/6/20

Implementation Date: Fall 2020

Student Demand

Year 1	Year 2	Year 3	Year 4	Year 5
24*	48*	72*	72*	72*

**Please note that expected enrollment figures are only for students admitted into this selective-entry program. Students in "seeking admission" status are not included. WKU currently averages 60 students per year seeking admission for the BA in Film. This trend is expected to continue, if not increase, in the future. Students in this seeking pool will have the option of applying for the proposed BFA in Film Production or continuing into the current BA in Film.*

Market Demand

As of Fall 2019, no university in Kentucky offers a Bachelor of Fine Arts film degree. This means any Kentucky student seeking a *pre-professional undergraduate degree in filmmaking* must look out-of-state for their undergraduate education. Although a small group of Kentucky universities, including WKU, offer baccalaureate film programs (WKU's and Campbellsville's *BA in Film*, Asbury's *BA in Media Communication, Film Production emphasis*), these programs are liberal arts degrees by design, requiring a minor, second major, or significant elective credits for graduation. Since film production is as much a technical enterprise as it is creative, students pursuing a career in the film industry would benefit from the enhanced focus and extended coursework provided by a pre-professional Bachelor of Fine Arts in Film Production.

In order to gauge interest for a BFA in Film Production, a survey was conducted among current WKU film students and film alumni. Support among both groups for a BFA in Film Production was overwhelmingly positive. Of the 74 current students who responded, 85% (n=63) said they would have chosen a BFA in Film Production if it were an option when they arrived at WKU. Of the 28 alumni responses, 86% (n=24) answered similarly. Sixty-two percent (n=46) of student respondents said they would apply for the BFA in Film Production if it becomes available. Most tellingly, 57% (n=42) of current students and 50% (n=14) of alumni said they would have chosen a Kentucky university *other than WKU* if it had offered a BFA in Film Production. There is clearly a desire among students seeking an undergraduate degree in film for a BFA in Film Production.

To this end, WKU wishes to offer a BFA in Film Production *alongside* its current liberal arts BA in Film degree. The BFA in Film Production will be an intensive pre-professional program which gives students numerous opportunities to make films without taking non-film courses concurrently. This option would be good for a student pursuing a career in the film/television industry in narrative filmmaking. The BA in Film is an open-ended liberal arts program giving students a wide breadth of knowledge through film electives and minor/double major options. This option would be good for a student who has a general interest in film, wants the option of double majoring, or intends to continue on to graduate school. Since many arts programs (including WKU's own Visual Art, Performing Arts, and Music programs), offer both degree types (pre-professional and liberal arts), there is precedent for the two programs to coexist at the same university.

Employer Demand:

	Regional	Regional Growth Projections	State	State Growth Projections	National	National Growth Projections
Type of Job	Producers and Directors					
Average Wage	\$49,175	11.11%	\$50,632	8.30%	\$71,680	5.00%
# of Openings	45	50	1,068	1,157	152,400	159,600
Type of Job	Film and Video Editors and Camera Operators					
Average Wage	No data	No data	\$49,447	17.40%	\$58,990	11.00%
# of Openings	No data	No data	115	135	69,200	77,100
Type of Job	Writers and Authors (Screenwriters)					
Average Wage	No data	No data	\$48,181	4.20%	\$62,170	0.00%
# of Openings	No data	No data	1,217	1,268	123,200	123,100
Type of Job	Art Directors					
Average Wage	No data	No data	\$80,373	1.00%	\$92,780	1.00%
# of Openings	No data	No data	573	579	101,000	101,900
Type of Job	Broadcast and Sound Engineering Technicians					
Average Wage	\$35,186	6.67%	\$39,827	12.00%	\$43,660	8.00%
# of Openings	30	32	341	382	144,300	155,800
Type of Job	International Alliance of Theatrical Stage Employees (IATSE) Member*					
Average Wage	Crew member working television shows				\$84,000 + benefits	
	Crew member working 10 commercials per month				\$72,000 + benefits	
	Crew member working independent feature films				\$50,000 + benefits	

Sources:

National Data: [Bureau of Labor Statistics' Occupational Outlook Handbook](#)

Regional and State Data: [Kentucky Center for Statistics](#)

*Since state and national labor data does not reflect a large percentage of crew positions in the film and television industry and since most major motion pictures, television shows, and commercials are covered by union contracts, Peter Kurland, Business Agent for International Alliance of Theatrical Stage Employees (IATSE) Local 492 (Nashville office for the film crew union), provided some additional data about union crew member salaries in the region.

Unnecessary Duplication

Similar Program 1:

Institution: Asbury University
CIP Code: 50.0602

Program Name: MFA in TV and Film Production

Comparison of Objectives/Focus/Curriculum to Similar Programs: No information available about the MFA program on Asbury's website.

Comparison of Student Populations: WKU's BFA in Film Production does not overlap student populations because it is targeted solely at an undergraduate student population, whereas the Asbury's MFA is targeted at a graduate student population. According to the CPE program inventory, the MFA program is a hybrid face-to-face / distance learning program. WKU's BFA in Film Production is a 100% face-to-face program.

Access to Existing Programs: The Masters in TV and Film Production at Asbury University cannot reach WKU's BFA target population because it is targeted for students who have already completed a baccalaureate degree.

Feedback from Other Institutions: Dr. Jim Owens, Dean of the School of Communication Arts at Asbury University, was emailed for comment on 10/25/19. No feedback provided at time of proposal submission.

Similar Program 2:

Institution: Bluegrass Comm. & Tech. College **Program Name:** AFA in Digital Cinematic Arts
CIP Code: 50.0602

Comparison of Objectives/Focus/Curriculum to Similar Programs: While BCTC's Associate of Fine Arts in Digital Cinematic Arts and WKU's BFA in Film Production share similar objectives (both emphasize hands-on, project-based learning of filmmaking), WKU's BFA in Film Production is over twice as many credit hours culminating in a baccalaureate degree. This allows for more hands-on experience over an extended period of time, ultimately culminating in an area of expertise (directing, cinematography, editing, etc.)

Comparison of Student Populations: WKU's BFA in Film Production does not overlap student populations because it is targeted solely at a student population pursuing a baccalaureate degree, whereas the AFA is targeted at students seeking a two-year degree. According to the CPE program inventory, the AFA in Digital Cinematic Arts is a hybrid face-to-face / distance learning program. WKU's BFA in Film Production is a 100% face-to-face program.

Access to Existing Programs: Students who complete BCTC's AFA degree could elect to continue their studies in WKU's current BA in Film or the proposed BFA in Film Production. A transfer student who has already completed their general education requirements could complete the BA in Film in two years. BCTC AFA students seeking the BFA in Film Production would require a three-year commitment to complete the degree.

Feedback from Other Institutions: Stephanie Fitch, Program Coordinator of Filmmaking and Cinematic Arts at BCTC, was emailed for comment on 10/25/19. No feedback provided at time of proposal submission.

Similar Program 3:

Institution: Western Kentucky University
CIP Code: 09.0701

Program Name: BA in Film

Comparison of Objectives/Focus/Curriculum to Similar Programs: Although they share a common core curriculum, the BFA in Film Production is designed for students wishing to pursue a career in the film/television industry in narrative filmmaking. The BA in Film would be ideal for students who have a general interest in film, want the option of double majoring, or intend to continue on to graduate school.

Comparison of Student Populations: Students wishing to pursue either the BFA in Film Production or the BA in Film will take the same film core curriculum courses their first year.

Access to Existing Programs: Students must apply for entry into the BFA in Film Production. Students who are not selected for the BFA or opt out of the application process will have the option of pursuing the BA in Film.

Feedback from Other Institutions: N/A

Similar Program 4:

Institution: Asbury University
CIP Code: 09.0799

Program Name: BA in Media Communication

Comparison of Objectives/Focus/Curriculum to Similar Programs: Like WKU's own BA in Film, Asbury's BA in Media Communication, Film Production emphasis is a liberal arts degree by design. The total number of credit hours (50) in the Media Communication program requires students choose multiple general electives to complete their graduation requirements. WKU's BFA in Film Production (81 credit hours) does not require general electives and gives students a concentrated study of filmmaking across their entire academic career.

Comparison of Student Populations: Although Asbury's BA in Media Communication and WKU's BFA in Film Production seek to recruit from the same undergraduate population, many of these potential students will opt for a public university instead of a private, Christian university for any number of reasons, such as cost, religious affiliation, content restrictions, etc.

Access to Existing Programs: As mentioned above, many students will opt for a public university for a variety of reasons.

Feedback from Other Institutions: **Feedback from Other Institutions:** Dr. Jim Owens, Dean of the School of Communication Arts at Asbury University, was emailed for comment on 10/25/19. No feedback provided at time of proposal submission.

Cost

Projected Revenue over Next Five Years	\$6,554,076
Projected Expenses over Next Five Years	\$2,778,710

Will additional faculty be needed? Yes

In AY 2018-2019, Western Kentucky University undertook a campus-wide Comprehensive Academic Program Evaluation (CAPE) assessing all academic programs on campus. The BA in Film major was one of fifteen academic programs to receive a Grow/Enhance recommendation. As a way to support these Grow/Enhance programs, the university has set aside funding in its new Resource Allocation, Management, and Planning (RAMP) budgeting model for a Strategic Investment Fund. This Fund will support a new tenure-track film faculty line with a specialization in the area of Production Design, covering courses in the proposed BFA in Film Production, as well as the current BA in Film.

Provide a budgetary rationale for creating this new program:

Western Kentucky University has made significant investments in the film program since its inception in 2010. These investments have made a meaningful impact in the lives of film students for the last nine years, whom receive access to industry-experienced faculty and professional-grade filmmaking equipment and facilities. In order to make this impact as equitable as possible, the film faculty ascribe to a "level playing field" philosophy regarding film facilities and equipment access. This means that parameters such as shooting days, running time, and equipment allocation are assigned based on course learning objectives, rather than first-come, first-serve or a model where the student with the most money makes the best film.

From a pedagogical perspective, this means that each student is afforded equal access to resources necessary to complete their education. From a *budgetary* perspective, this helps create maximum utilization of the program's said resources, as classes and productions are strictly scheduled to make sure that every student can use them. However, despite the fact that the BA in Film is currently running at near capacity, equipment and facility utilization is not 100% due to the limit of film production courses that can fit into a liberal arts degree. There are many days throughout the academic year when equipment and facilities are not being used.

In addition to any new revenue a BFA in Film Production will create through increased enrollment, the new program, with its increase in total hands-on courses and its emphasis on applied learning through making films, will be designed so that current facilities and equipment will be utilized nearly every day of the academic year. The relatively small cost of an additional faculty line will maximize the university's investment while allowing for nearly double the total number of students across both majors (estimated 240 total).

EPIDEMIOLOGY GRADUATE CERTIFICATE

REQUEST: Approval of a Graduate Certificate in Epidemiology offered through College of Health and Human Services.

FACTS: Epidemiology, as defined by the World Health Organization, is the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems. This graduate certificate develops competencies in epidemiology including those related to disease measurement and distribution, outbreak investigations, prevention and control, and applied analytical methods in public health.

Students are required to take a total of 12 hours. PH 581, 582, and 630 are required courses. In addition, students choose an elective from PH 620 or EOHS 572.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: Implementation date will be Fall 2020 with no additional resources required. Courses for the certificate are required for the MPH program.

RECOMMENDATION: President Timothy C. Caboni recommends approval of a Graduate Certificate in Epidemiology with implementation Fall 2020.

MOTION: Approval to establish a Graduate Certificate in Epidemiology effective Fall 2020.

**College of Health and Human Services
Department of Public Health
Proposal to Create a New Certificate Program
(Action Item)**

Contact Person: Dr. Marilyn Gardner
marilyn.gardner@wku.edu; 270-745-5864

1. Identification of program:

1.1. **Program title:** Epidemiology

1.2. **Required hours in program:** 12

1.3. **Special information:** N/A

1.4. **Catalog description:** Epidemiology, as defined by the World Health Organization, is the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems. This graduate certificate develops competencies in epidemiology, including those related to disease measurement and distribution, outbreak investigations, prevention and control, and applied analytical methods in public health.

Students are required to take a total of 12 hours. PH 581, 582, and 630 are required courses. In addition, students choose an elective from PH 620 or EOHS 572.

1.5. **Classification of Instructional Program Code (CIP):** 26.1309 - Epidemiology

2. Learning outcomes of the proposed certificate program:

- Apply epidemiological methods to describe public health problems.
- Apply epidemiological methods to assess and analyze impact of public health problems.
- Interpret epidemiological findings, including relevance to public health practice.
- Communicate epidemiological findings to professional and lay audiences.

3. Rationale:

3.1 **Reason for developing the proposed certificate program:**

The Kentucky Department of Health actively seeks to build epidemiologic capacity in the Commonwealth. There is a need for epidemiologists in local and health state agencies, as well as in medical care settings. Some MPH applicants and MPH students have expressed a desire for an epidemiology certificate.

3.2. **Relationship of the proposed certificate program to other programs now offered by the department:** The required and elective courses for the proposed certificate are currently offered as core Master of Public Health courses and electives.

3.3. **Relationship of the proposed certificate program to certificate programs offered in other departments:** There are no similar certificate programs offered in other departments

3.4. **Projected enrollment in the proposed certificate program:** We project four to six students in the certificate annually during the first few years. However, given the COVID-19 pandemic, epidemiology is in the news daily, which may boost enrollments.

3.5. **Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):** The Kentucky Department of Health actively seeks to build epidemiologic capacity in the Commonwealth. There is a need for epidemiologists in local

and health state agencies, as well as in medical care settings. Some MPH applicants and MPH students have expressed a desire for an epidemiology certificate.

Currently, no universities in the Commonwealth of Kentucky have an epidemiology graduate certificate program. The University of Kentucky and University of Louisville both have certificates in Biostatistics, but neither certificate incorporates epidemiology.

A comprehensive search of Council on Education for Public Health (CEPH) accredited schools (24) and programs (27) of public health in Southern Regional Education Board (SREB) states yielded only six institutions offering stand-alone graduate certificates in public health. Two other institutions offer add-on certificates to MPH students. All eight institutions are schools of public health.

- University of South Florida (2) Concepts & Tools of Epidemiology and Epidemiology of Infectious Disease
- University of Florida: Psychiatric Epidemiology
- Emory: Genetic & Molecular Epidemiology (degree add-on)
- University of Georgia: Infectious Disease Epidemiology
- Tulane University (2): Epidemiology Methods and Genetic Epidemiology (both degree add-on)
- Johns Hopkins: Epidemiology for Public Health Professionals
- University of North Carolina – Chapel Hill: Field Epidemiology
- Eastern Tennessee State University: Epidemiology

Certificates in Public Health Research Methods and in Advanced Epidemiology at Columbia University seem to be add-on certificates if enrolled in another program. A certificate in Public Health Fundamentals and Principles with some epidemiology courses is offered at the University of Albany, yet seems to be only for students enrolled in a degree program.

3.6 **Relationship of the proposed certificate program to the university mission and objectives:**

The online Certificate in Epidemiology, available as a standalone graduate certificate or as a set of electives within the Council on Education for Public Health (CEPH) accredited Master of Public Health (MPH) program, equips students to apply epidemiological methods to uncover the patterns, causes and effects of disease, and ultimately to help solve public health issues. Through research, education and policy, epidemiologists take on the task of uncovering trends and minimizing the risk and incidence of negative health outcomes. The skills required cross many disciplines from communication to the sciences.

This certificate program has direct applicability to several KY Council on Post-secondary Education Strategic Objective and Strategies:

- CPE Objective 9. Improve the career readiness and employability of post-secondary education graduates.

- CPE Strategy 9.5. Identify current and emerging workforce demands, entrepreneurial business opportunities, and stackable credentials that can lead to additional education/training.
- CPE Strategy 9.6. Advance Kentucky’s STEM and health agendas through ongoing leadership, advocacy, and collaboration.
- CPE 3. Objective 11. Expand regional partnerships, outreach and public service that improve the health and quality of life of Kentucky communities.
- CPE Objective 11. Expand regional partnerships, outreach and public service that improve the health and quality of life of Kentucky communities.

This certificate furthers the statewide plan by: 1) preparing students to address critical needs for epidemiologists in local health departments and districts; 2) attracting additional adult learners to WKU from the public health workforce and related fields; and, 3) enhancing career readiness of students through applied learning approaches.

4. Curriculum:

PH 581 Applied Methods in Public Health Practice/Field Epidemiology (3)
 PH 582 Epidemiology (3)
 PH 630 Advanced Epidemiology (3)

Elective (3 hours): PH 620 Advanced Biostatistics (3) or EOHS 572 (Environmental and Occupational Epidemiology)

5. Budget implications: None. All courses are part of the current MPH program.

6. Proposed term for implementation: Fall 2020

7. Prior committee approvals:

Committee	Approval Dates
Department of Public Health	8/27/2019
CHHS Curriculum Committee	01/28/2020
Graduate Curriculum Committee	02/06/2020
Graduate Council	02/13/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	



MARKET ANALYSIS INFORMATION
for
GRADUATE CERTIFICATE IN EPIDEMIOLOGY

Submitted to WKU Board of Regents

May 1, 2020

Master of Public Health
Department of Public Health
College of Health and Human Services

Kentucky Data

Overall Score (18 Percentile) -7

Student Demand (50 Percentile) 2

Category	Percentile	Criterion	Value	Score
Size	0	Inquiry Volume (12 Months)	0	0
	0	Int'l Page Views (12 Months)	0	NS
	0	Google* Search Volume (3 Months)	NA	NS
	0	Completion Volume	0	0
Growth	96	Inquiry Volume YoY Change (Units)	0	1
	0	Google* Search YoY Change (Units)	NA	NS
	93	Completion Volume YoY Change (Units)	0	1
	0	Inquiry Volume YoY Change (%)	NA	NS
	0	Google* Search YoY Change (%)	NA	NS
	0	Completion Volume YoY Change (%)	NA	NS

Degree Fit (6 Percentile) -5

Category	Percentile	Criterion	Value	Score
Completions		National Completions by Level	See	-5
Workforce		National Workforce Ed Attainment	Below	0
NHEBI Natl 2 Year	0	Cost Index**	NA	NS
	0	Student: Faculty Index	NA	NS

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
Certificate	0%	0%	0%
Associates	0%	0%	0%
Bachelors	0%	0%	1%
Postbaccalaureate Certificate	0%	0%	6%
Masters	100%	50%	71%
Post-masters Certificate	0%	0%	4%
Doctoral	0%	50%	18%
Unknown	0%	0%	0%

Competitive Intensity (50 Percentile) 6

Category	Percentile	Criterion	Value	Score
Volume of Competition	0	Campuses with Graduates**	0	6
	97	Institutions YoY Change (Units)	0	0
	0	Average Completions/Institution	NA	NS
	0	Median Completions/Institution	NA	NS
	0	Program Size YoY Change (Units)	NA	NS
	0	Program Size YoY Change (%)	NA	NS
	0	Insts. with Program Online**	0	NS
	0	% of Institutions	NA	NS
	0	Online Completions**	0	NS
	0	% of Completions	NA	NS
Market Saturation	0	Completions per 1,000 Pop**	NA	NS
	0	Average Cost per Inquiry**	NA	NS
	0	Google Search * Cost per Click**	NA	NS
	0	Competition Index**	NA	NS

CIP Description

A program that focuses on the scientific study of disease, disability, and trauma patterns within and across populations and the development of health management mechanisms to prevent and control disease outbreaks and injurious behaviors. Includes instruction in biostatistics, biochemistry, molecular biology, immunology, disease and injury determinants, genetic disease and disability factors, behavioral studies, health services research, environmental disease and injury factors, and population studies.

Job Postings (Market)

Award Level	Minimum Education Requested
- Unspecified -	NA
High School/Certificate	NA
Associates	NA
Bachelors	NA
Masters	NA
Doctoral	NA

BLS Workforce Edu (Natl)

Award Level	BLS Educational Attainment
No College	1%
Some College	0%
Associates	1%
Bachelors	25%
Masters	23%
Doctoral	51%

Employment* (23 Percentile) -10

Category	Percentile	Criterion	Value	Score
Size	0	Job Postings Total (12 Months)	NA	NS
	0	BLS Current Employment	0	-2
	0	BLS Annual Job Openings	0	-1
	43	Share of Generalist Employment	1	-2
	43	Share of Generalist Openings	0	-1
Growth	0	Job Postings YoY Change (Units)	NA	NS
	0	Job Postings YoY Change (%)	NA	NS
	0	BLS YoY Change (%)	NA	NS
	0	BLS 3-Year Historic Growth (CAGR)	NA	NS
	0	BLS 10-Year Future Growth (CAGR)	NA	NS
Saturation	0	Job Postings per Graduate	NA	NS
	0	BLS Job Openings per Graduate	0	-2
	0	10th-Percentile Wages	NA	NS
Pay and Outcomes	2	Wages (Age < 30)	\$29,663	-2
	35	Wages (Age 30-60)	\$76,261	0
	56	% with Any Graduate Degree	40%	NS
	45	% with Masters	24%	NS
	81	% with Doct/Prof Degree	17%	NS
	63	% Unemployed (Age <30)**	5%	0
	42	% Unemployed (Age 30-60)**	3%	0
	28	% in Direct Prep Jobs	13%	NS
	0	GE Wages - Assoc. & Cert	NA	NS
	0	GE Placement Rate - Assoc. & Cert	NA	NS

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.
** - Color scale in reverse.

NA - No data available/not currently tracked. NS - Not Scored in Rubrics (values = 0).
2-Yr - Associates & certificate programs only.

National Data

Student Demand (7 Percentile) **-1**

Category	Percentile	Criterion	Value	Score
Size	86	Inquiry Volume (12 Months)	3	0
	0	Int'l Page Views (12 Months)	0	NS
	0	Google* Search Volume (3 Months)	NA	NS
	0	Completion Volume	0	0
Growth	7	Inquiry Volume YoY Change (Units)	-27	0
	0	Google* Search YoY Change (Units)	NA	NS
	58	Completion Volume YoY Change (Units)	0	0
	24	Inquiry Volume YoY Change (%)	-90%	-1
	0	Google* Search YoY Change (%)	NA	NS
	0	Completion Volume YoY Change (%)	NA	NS

Degree Fit (6 Percentile) **-5**

Category	Percentile	Criterion	Value	Score
Completions		National Completions by Level	See	-5
Workforce		National Workforce Ed Attainment	Below	0
NHEBI Natl 2 Year	0	Cost Index**	NA	NS
	0	Student: Faculty Index	NA	NS

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
Certificate	4%	0%	0%
Associates	0%	0%	0%
Bachelors	0%	1%	1%
Postbaccalaureate Certificate	0%	7%	6%
Masters	96%	75%	71%
Post-masters Certificate	0%	4%	4%
Doctoral	0%	12%	18%
Unknown	0%	0%	0%

Competitive Intensity (64 Percentile) **4**

Category	Percentile	Criterion	Value	Score
Volume of Competition	0	Campuses with Graduates**	0	6
	66	Institutions YoY Change (Units)	0	0
	0	Average Completions/Institution	NA	NS
	0	Median Completions/Institution	NA	NS
	0	Program Size YoY Change (Units)	NA	NS
	0	Program Size YoY Change (%)	NA	NS
	0	Insts. with Program Online**	0	NS
	0	% of Institutions	NA	NS
	0	Online Completions**	0	NS
	0	% of Completions	NA	NS
Market Saturation	0	Completions per 1,000 Pop**	0	NS
	100	Average Cost per Inquiry**	\$112	-2
	0	Google Search * Cost per Click**	NA	NS
0	Competition Index**	NA	NS	

CIP Description

A program that focuses on the scientific study of disease, disability, and trauma patterns within and across populations and the development of health management mechanisms to prevent and control disease outbreaks and injurious behaviors. Includes instruction in biostatistics, biochemistry, molecular biology, immunology, disease and injury determinants, genetic disease and disability factors, behavioral studies, health services research, environmental disease and injury factors, and population studies.

Job Postings (Market)

Award Level	Minimum Education Requested	Award Level	BLS Educational Attainment
- Unspecified -	12%	No College	1%
High School/Certificate	30%	Some College	0%
Associates	30%	Associates	1%
Bachelors	66%	Bachelors	25%
Masters	61%	Masters	23%
Doctoral	54%	Doctoral	51%

BLS Workforce Edu (Natl)

Employment* (21 Percentile) **-12**

Category	Percentile	Criterion	Value	Score
Size	31	Job Postings Total (12 Months)	336	-2
	32	BLS Current Employment	1,768	-2
	32	BLS Annual Job Openings	177	-1
	43	Share of Generalist Employment	127	-2
	43	Share of Generalist Openings	12	-1
Growth	8	Job Postings YoY Change (Units)	-54	NS
	5	Job Postings YoY Change (%)	-14%	NS
	78	BLS YoY Change (%)	6%	0
	99	BLS 3-Year Historic Growth (CAGR)	18%	NS
	78	BLS 10-Year Future Growth (CAGR)	0	NS
Saturation	17	Job Postings per Graduate	0.2	-2
	14	BLS Job Openings per Graduate	0.1	-2
Pay and Outcomes	78	10th-Percentile Wages	\$49,577	2
	2	Wages (Age < 30)	\$29,663	-2
	35	Wages (Age 30-60)	\$76,261	0
	56	% with Any Graduate Degree	40%	NS
	45	% with Masters	24%	NS
	81	% with Doct/Prof Degree	17%	NS
	63	% Unemployed (Age <30)**	5%	0
	42	% Unemployed (Age 30-60)**	3%	0
	28	% in Direct Prep Jobs	13%	NS
0	GE Wages - Assoc. & Cert	NA	NS	
0	GE Placement Rate - Assoc. & Cert	NA	NS	

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.
** - Color scale in reverse.

NA - No data available/not currently tracked. NS - Not Scored in Rubrics (values = 0).
2-Yr - Associates & certificate programs only.

Background Information

Epidemiology is defined as the “study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.”¹ Described as the basic science of public health, epidemiology is a quantitative discipline that employs causal reasoning to explain health-related behaviors, states, and events. It is an integral component of public health, providing the foundation for guiding policy and evidence-based practices. The public health response to the COVID-19 pandemic exemplifies epidemiology in action. The proposed epidemiology certificate will provide current graduate students and working professionals a pathway to develop and advance their epidemiology competence.

1. If the student demand total is **less than 10**, describe how you plan to market the program to increase student demand/interest at WKU.

We will market the epidemiology certificate in four primary ways:

Through the Master of Public Health (MPH): The MPH is a professional practice degree that prepares students from multiple academic and professional backgrounds for a wide range of health-related professions. In fall 2017, the program transitioned from a traditional MPH with prescribed concentrations, to a novel approach whereby students tailor electives to meet their educational and professional goals. Beyond the required 30 credit hour core, students may elect to complete certificates, thus earning dual credentials. Offering this new epidemiology certificate will increase the marketability of the MPH, as we are currently unable to attract students who want a concentration in epidemiology.

As an Added Credential and Continuing Education for Health Professionals: The knowledge and skills encompassed in the certificate can enhance job proficiencies and career opportunities. Job postings for occupations, such as data managers, nurses, public safety officers, clinical coordinators, compliance directors, health coordinators, project managers, health service directors include skill sets linked to epidemiology. We will work with DELO to market the certificate as a freestanding program to public and clinical health professionals in the Commonwealth and nationally. We will also work with the military programs to target military officers.

Through Interprofessional Collaborations at WKU: The epidemiology certificate complements degree programs outside of public health and courses from the proposed certificate currently function as electives in other certificate and degree programs. We will continue to seek these interprofessional academic collaborations with graduate degree programs for which epidemiology is a professional fit (e.g. biology, agriculture, sociology, health administration, and nursing).

Through Kentucky Public Health Assistance and Support Team (K-PHAST): The MPH program partners with the Kentucky Department of Public Health to develop trained teams of student/faculty volunteers to assist and provide support to local and regional health departments during public health outbreaks, investigations, and other responses. This past year, we opened the training to students outside of the MPH program to include University of Kentucky medical students, WKU undergraduates, and Gatton Academy students. Within the training, we promote the MPH, MPH JUMP, and certificate programs.

2. If the student demand is **greater than 10**, describe how you plan to advertise the program's availability to the current student body and/or to prospective students.

N/A

3. If the employment total is **less than 5**, provide a rationale on how this program can lead to employability of students. Address any partnerships developed to assist finding employment for students with this credential.

Per the [US Bureau of Labor Statistics](#), employment of epidemiologists is projected to grow 5 percent from 2018 to 2028, about as fast as the average for all occupations, and epidemiologists are likely to have good job prospects overall. Long-term projections from [Projections Central](#)¹ project an 8.2 percent increase nationally, and a 20 percent increase in Kentucky. Short-term projections were not available.

It is important to note that these are *pre-pandemic* projections. Certainly, the COVID-19 pandemic illustrates the importance of a strong public health infrastructure and epidemiologic capacity. This will likely translate to a more rapid growth among epidemiologists and other public health professionals than current projections. COVID-19 itself has necessitated a rapid scale-up of the public health workforce dedicated to case identification and contact tracing. The [National Association of State and Territorial Health Organizations estimates](#) that the US will need to hire as many as 100,000 disease intervention specialists immediately for this purpose. Indeed, many states – including Kentucky – have begun the hiring process.

This certificate will *enhance* the employability of students seeking careers in public health. In the Commonwealth, entry-level epidemiologists are required to have a master's degree (MPH or MSPH preferred) with a *minimum* of two graduate-level epidemiology courses. Additional coursework in epidemiology is typically required for higher-level positions.

This certificate will also enhance the career-development of public health and health-care professionals (broadly defined), as well as those working in occupational health and safety. The response to the COVID-19 pandemic highlights the importance of a strong epidemiologic infrastructure and those with epidemiologic training will be in demand as these industries reshape post-pandemic.

Employment assistance is leveraged through our academic health department partnerships with Barren River District Health Department and Green River District Health Department, and membership in the state's Building Epidemiologic Capacity of Kentucky (BECKY) committee and various professional organizations.

4. List any institutions offering a similar program. Refer to <https://dataportal.cpe.ky.gov/KYAcademicProgInventory.aspx> to attain program listings using the same CIP code at other institutions.

Currently, there are five programs in the Commonwealth using the 26.1309 CIP code.

¹ The Projections Managing Partnership (PMP) operates an integrated, nationwide program of state and local projections. Funding for the PMP is provided by the U.S. Department of Labor, Employment & Training Administration, with technical support from the Bureau of Labor Statistics and other entities across the country.

Attribute	Institution/Program:	WKU	Inst. 1	Inst. 2^a	Inst. 3^a	Inst. 4^b	Inst. #5^c
Available 100% online		Yes	No	No	No	No	No
Free-standing graduate certificate		Yes	Yes	No	No	No	No
Contributes to MPH degree		Yes	No	--	--	--	--
Credit hours		12	15	42	42	31	56
Primary focus		Public Health	Clinical Research	Public Health	Public Health	Clinical Research	Research & Clinical Trials

a=MPH; b=MSc; c=PhD

Institution 1: University of Louisville

Program Name: Clinical Investigation Sciences

Similarities/Differences with Proposed Program:

Similarities: Post-baccalaureate certificate; can contribute to master's degree (see #4);

Differences: Focus is on clinical research; program targets medical residents, nurses, and other full-time medical professionals interested in being involved with clinical trials; requires face-to-face instruction.

This is an important distinction: Public health epidemiology informs interventions that are applied to populations, or that confer benefits beyond the individual, while medical epidemiology informs interventions that improve the health of treated individuals.

Institution 2: University of Louisville

Program Name: Epidemiology

Similarities/Differences with Proposed Program:

Similarities: Public health focus

Differences: MPH degree with concentration in epidemiology versus graduate certificate; requires face-to-face instruction

Institution 3: University of Kentucky

Program Name: Epidemiology

Similarities/Differences with Proposed Program:

Similarities: Public health focus

Differences: MPH degree with concentration in epidemiology versus graduate certificate; requires face-to-face instruction

Institution 4: University of Louisville

Program Name: Clinical Investigation Sciences

Similarities/Differences with Proposed Program

Similarities: None

Differences: MSc degree versus graduate certificate; Focus is on clinical research; program targets medical residents, nurses, and other full-time medical professionals interested in being involved with clinical trials; requires face-to-face instruction

Institution 5: University of Kentucky

Program Name: Epidemiology and Biostatistics

Similarities/Differences with Proposed Program:

Similarities: None

Differences: Ph.D. degree versus graduate certificate; Focus is on research and clinical trials; requires face-to-face instruction

5. Provide a budgetary rationale for creating this certificate program. If the certificate will use current faculty and existing courses, be sure to address any positive budgetary impacts.

The certificate will use current faculty and existing courses. At minimum, this certificate will be budget neutral.

We expect, however, a positive budgetary impact primarily through increased enrollments in the MPH program. Between 1992 and 2016, master's degree conferrals in public health increased approximately 330% nationally, from 4033 in 1992 to 17,321 in 2016. Throughout this timeframe, approximately 11% of U.S. public health degrees conferred were with epidemiology concentrations.² As mentioned earlier, this is an untapped market for WKU.

We also expect a positive budgetary impact through potential enrollments by working professionals seeking to add knowledge and skills in epidemiology.

6. Expanding on the rationale submitted through the WKU curricular process, use any data source (Gray Data, etc.) to provide additional rationale for your program. Address on how it pertains to the recruitment and retention of students, the job market, the value of the credential, and student interest. EMSI data is available through the Division of Extended Learning and Outreach. Contact Anna Kerr (Anna.olson@wku.edu) to get EMSI data for your rationale.

EMSI data were gathered (reports attached) and are summarized below.

Epidemiologist: The Occupation Overview (report provided) shows an overall increase of employment from now until 2029 just for the Epidemiologist occupation. The Program Overview (reports provided) shows very little competition in distance offered programs (postbaccalaureate certificate) and a large percentage increase of completions since 2017. These data show a growing interest for the program and for the distance offered choice for students. There is good employment opportunity available for this degree within the specific job of Epidemiologist. This is also true for jobs in the Health Care and Social Assistance Industry that require epidemiology skills, as reported in the Job Posting Reports.

Job Posting Analytics based on Epidemiology Skills: The reports show that within a specific field of Healthcare Manager (report provided), there is a good demand for the skills acquired by this certificate. These skills were listed in 961 unique job postings and 3,530 total job postings over the past three years in an eight-state region, including Kentucky. The median salary was \$75,000. When branching out from that specific occupation into the Health Care and Social Assistance Industry (report provided), there are many types of jobs that can benefit from the skills acquired. These jobs include data managers, staff nurses, public safety officers, clinical coordinators, compliance directors, health coordinators, project managers, health service directors and marketing communication persons. These skills were listed in 4,108 unique job postings and 16,000 total job postings over the past three years in an eight-state region, including Kentucky. The median salary was just over \$64,000. All of these jobs are recent postings and help demonstrate that this certificate can be applied across many disciplines and combined with many degree programs for marketability.

Google Search Data: The data show that when marketing the program, there is already a recognition by the general public of what the certificate is and how it can be applied. These data allow the marketing to show how the skills can be applied with other degrees and within the job market for student outcomes instead of having to spend time and money explaining the epidemiology. Over the past year, the average number of monthly searches totaled 6,240 for keywords of epidemiology degree, online epidemiology certificate, and various versions of epidemiology with the wording of masters, master in public health or MPH (excel file provided).

Conclusion

This proposed epidemiology certificate comes at an opportune time for WKU to emerge as responsive and relevant leader in building the epidemiologic capacity of the Commonwealth and beyond. The epidemiology certificate will allow working professionals to earn a credential to advance in their organization or to earn a job that requires epidemiological skills. The epidemiology certificate will enhance our ability to recruit MPH students to WKU, and will increase enrollments in our existing MPH courses. Both will increase revenue to the Department of Public Health, the College of Health and Human Services, and WKU.

References

1. JM, editor. Dictionary of epidemiology. 4th ed. New York: Oxford University Press; 2001. p. 61.
2. Leider, J. P., Plepys, C. M., Castrucci, B. C., Burke, E. M., & Blakely, C. H. (2018). Trends in the Conferral of Graduate Public Health Degrees: A Triangulated Approach. *Public Health Reports*, 133(6), 729–737. <https://doi.org/10.1177/0033354918791542>

Job Posting Analytics

Emsi Q1 2020 Data Set

April 2020

Kentucky

Parameters

Regions

Code	Description
1	Alabama
12	Florida
13	Georgia
17	Illinois

Code	Description
18	Indiana
21	Kentucky
39	Ohio
47	Tennessee

Occupations

Results should include

Code	Description
11-9111	Medical and Health Services Managers

Skills & Qualifications

Results should include any of the selected skills

Code	Skills & Qualifications
Hard Skill	Epidemiology
Hard Skill	Epidemiological Method
Hard Skill	Genetic Epidemiology
Hard Skill	Clinical Surveillance
Hard Skill	Public Surveillance
Hard Skill	Disease Surveillance
Hard Skill	Surveying

Code	Skills & Qualifications
Hard Skill	Behavioral Risk Factor Surveillance Systems
Hard Skill	Field Surveys
Hard Skill	Survey Data Collection
Hard Skill	Online Surveys (Evaluation Methods)
Hard Skill	Public Survey
Hard Skill	Survey Sampling
Hard Skill	Statistical Survey

Hard Skill	National Electronic Disease Surveillance Systems
------------	--

Minimum Experience Required

Any

Education Level

Any

Keyword Search

Timeframe

Jan 2017 - Mar 2020

Posting Lifespan

Any Duration

Job Postings Summary

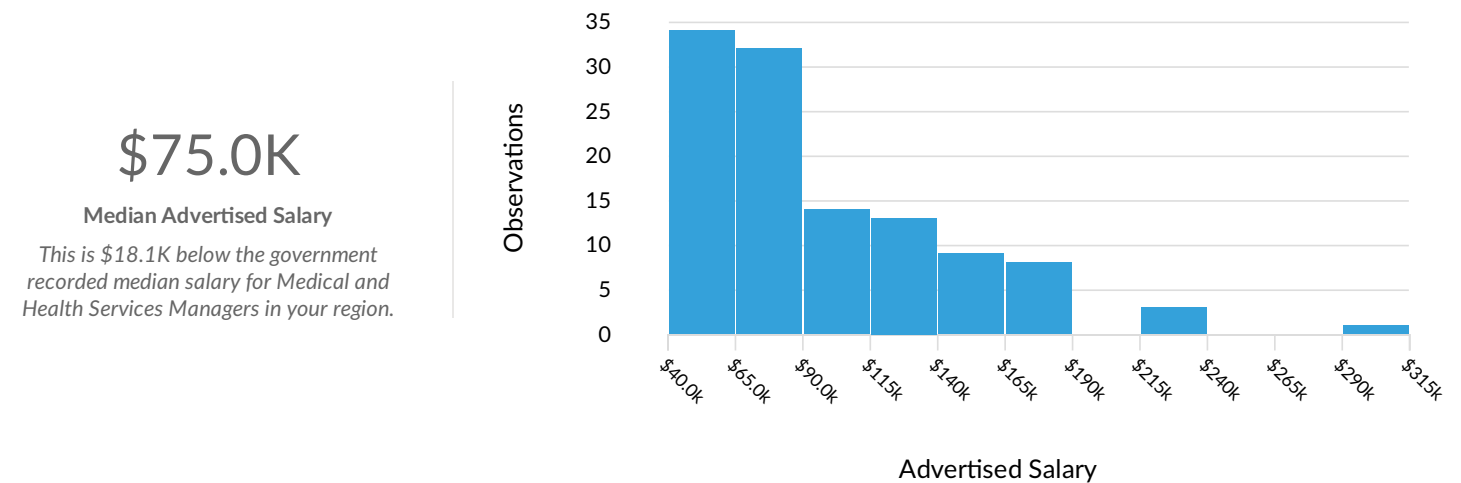
<p>961 Unique Postings 3,530 Total Postings</p>	<p>4 : 1 Posting Intensity Regional Average: 4 : 1</p>	<p>36 days Median Posting Duration Regional Average: 31 days</p>
---	--	--

There were 3,530 total job postings for your selection from January 2017 to March 2020, of which 961 were unique. These numbers give us a Posting Intensity of 4-to-1, meaning that for every 4 postings there is 1 unique job posting.

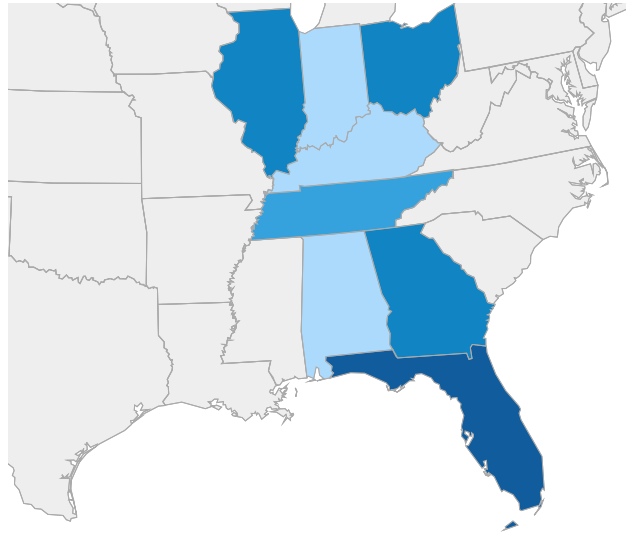
This is close to the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that they are putting average effort toward hiring for this position.

Advertised Salary

There are 114 advertised salary observations (12% of the 961 matching postings).

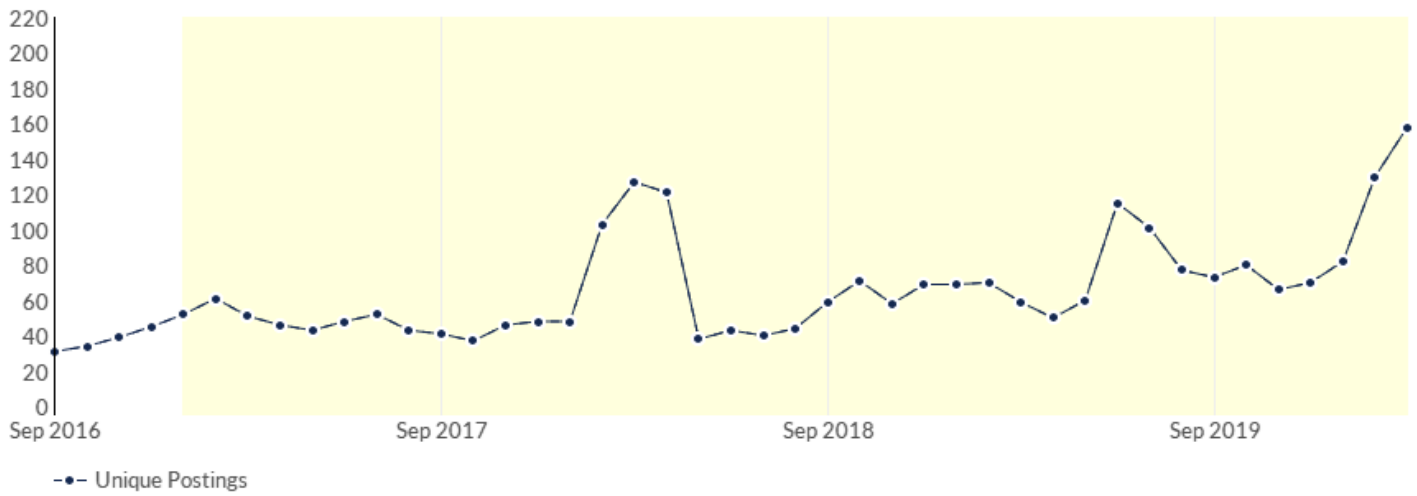


Job Postings Regional Breakdown



State	Unique Postings (Jan 2017 - Mar 2020)
Florida	257
Illinois	193
Georgia	170
Ohio	139
Tennessee	85

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Sep 2016	31	2 : 1
Oct 2016	34	2 : 1
Nov 2016	39	2 : 1
Dec 2016	45	4 : 1
Jan 2017	52	5 : 1
Feb 2017	61	5 : 1
Mar 2017	51	7 : 1
Apr 2017	46	7 : 1
May 2017	43	7 : 1
Jun 2017	48	7 : 1
Jul 2017	52	4 : 1
Aug 2017	43	4 : 1
Sep 2017	41	5 : 1
Oct 2017	37	5 : 1
Nov 2017	46	5 : 1
Dec 2017	48	5 : 1
Jan 2018	48	5 : 1
Feb 2018	103	3 : 1
Mar 2018	127	3 : 1
Apr 2018	121	3 : 1

May 2018	38	7 : 1
Jun 2018	43	6 : 1
Jul 2018	40	6 : 1
Aug 2018	44	5 : 1
Sep 2018	59	5 : 1
Oct 2018	71	4 : 1
Nov 2018	58	4 : 1
Dec 2018	69	5 : 1
Jan 2019	69	5 : 1
Feb 2019	70	5 : 1
Mar 2019	59	5 : 1
Apr 2019	50	6 : 1
May 2019	60	5 : 1
Jun 2019	115	3 : 1
Jul 2019	101	4 : 1
Aug 2019	77	6 : 1
Sep 2019	73	6 : 1
Oct 2019	80	6 : 1
Nov 2019	66	5 : 1
Dec 2019	70	4 : 1
Jan 2020	82	4 : 1
Feb 2020	130	3 : 1
Mar 2020	158	3 : 1


Education & Experience Breakdown

Education Level	Unique Postings	% of Total
Unspecified	216	22%
High school or GED	24	2%
Associate's degree	41	4%
Bachelor's degree	469	49%
Master's degree	396	41%
Ph.D. or professional degree	151	16%

Minimum Experience	Unique Postings	% of Total
No experience listed	214	22%
0 - 1 Years	119	12%
2 - 3 Years	243	25%
4 - 6 Years	308	32%
7 - 9 Years	31	3%
10+ Years	46	5%

Top Companies Posting

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Anthem, Inc.	403 / 198	2 : 1	35 days
State of Florida	207 / 49	4 : 1	20 days
Aetna Inc.	211 / 44	5 : 1	39 days
Emory University	139 / 39	4 : 1	62 days
ASTELLAS PHARMA INC.	331 / 25	13 : 1	28 days
The Ohio State University	75 / 24	3 : 1	34 days
PRA Health Sciences, Inc.	16 / 15	1 : 1	8 days
Bluecross Blueshield of Tennessee, Inc.	39 / 13	3 : 1	19 days
Ucb, Inc.	41 / 12	3 : 1	48 days
United States Department of Defense	17 / 11	2 : 1	14 days
Clinical Management Consultants	21 / 10	2 : 1	43 days
Icf International, Inc.	42 / 9	5 : 1	60 days
State of Ohio	13 / 9	1 : 1	14 days
Centegra Health System	17 / 8	2 : 1	39 days
Pfizer Inc.	12 / 8	2 : 1	8 days
HCA Holdings, Inc.	34 / 8	4 : 1	75 days
AbbVie Inc.	27 / 8	3 : 1	56 days
Northwestern Memorial Hospital	29 / 7	4 : 1	62 days
State of Georgia	21 / 7	3 : 1	63 days
Icon Clinical Research, Inc	25 / 7	4 : 1	50 days
Beigene (usa), Inc.	6 / 6	1 : 1	31 days
CVS Health Corporation	64 / 6	11 : 1	70 days
University of Miami	30 / 6	5 : 1	66 days
Wellstar Health System, Inc.	21 / 6	4 : 1	18 days
Humana Inc.	19 / 6	3 : 1	15 days
Rush University	9 / 5	2 : 1	25 days
American College of Surgeons Inc	10 / 5	2 : 1	96 days
Dph Inc	7 / 5	1 : 1	33 days


The Cleveland Clinic Foundation	15 / 5	3 : 1		54 days
Indiana State University	6 / 5	1 : 1		7 days
Tennessee Department of Transportation	18 / 5	4 : 1		34 days
Baxter International Inc.	20 / 5	4 : 1		26 days
Vibra Healthcare, LLC	20 / 4	5 : 1		48 days
Westcare California, Inc.	4 / 4	1 : 1		33 days
Jackson Health System	6 / 4	2 : 1		31 days
Core Medical Group	7 / 4	2 : 1		30 days
Catholic Health Initiatives	13 / 4	3 : 1		17 days
Manatt, Phelps & Phillips, LLP	41 / 4	10 : 1		40 days
Moffitt Cancer Center	9 / 4	2 : 1		93 days
Adventist Health System	33 / 4	8 : 1		34 days
Centers For Disease Control and Prevention	16 / 4	4 : 1		35 days
Northwestern Medical Center, Inc.	21 / 4	5 : 1		23 days
American Medical Association	12 / 4	3 : 1		66 days
Nationwide Children's Hospital	10 / 4	3 : 1		59 days
City of Columbus	9 / 3	3 : 1		21 days
Masc Medical LLC	19 / 3	6 : 1		144 days
Premise, Inc	9 / 3	3 : 1		19 days
Professional Diversity Network, Inc.	35 / 3	12 : 1		52 days
Integrated Resources, Inc	20 / 3	7 : 1		51 days
Mayo Clinic	12 / 3	4 : 1		46 days

Top Cities Posting

City	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Atlanta, GA	375 / 98	4 : 1 	53 days
Chicago, IL	439 / 88	5 : 1 	45 days
Columbus, OH	162 / 54	3 : 1 	34 days
Nashville, TN	189 / 34	6 : 1 	32 days
Northbrook, IL	398 / 31	13 : 1 	42 days
Miami, FL	97 / 30	3 : 1 	31 days
Indianapolis, IN	77 / 27	3 : 1 	33 days
Orlando, FL	80 / 20	4 : 1 	47 days
Tallahassee, FL	88 / 18	5 : 1 	33 days
Chattanooga, TN	53 / 16	3 : 1 	19 days
Tampa, FL	48 / 16	3 : 1 	48 days
Louisville, KY	43 / 15	3 : 1 	32 days
Deerfield, IL	48 / 13	4 : 1 	29 days
Cleveland, OH	53 / 12	4 : 1 	39 days
Lexington, KY	35 / 12	3 : 1 	48 days
Memphis, TN	40 / 12	3 : 1 	30 days
Cincinnati, OH	16 / 11	1 : 1 	36 days
Jacksonville, FL	48 / 10	5 : 1 	33 days
Augusta, GA	24 / 9	3 : 1 	35 days
Gainesville, FL	52 / 9	6 : 1 	44 days
Fort Lauderdale, FL	18 / 8	2 : 1 	30 days
Plantation, FL	14 / 8	2 : 1 	16 days
Riviera Beach, FL	24 / 8	3 : 1 	15 days
Sebring, FL	68 / 8	9 : 1 	94 days
Richfield, OH	35 / 7	5 : 1 	36 days
Columbus, GA	6 / 6	1 : 1 	29 days

Marathon, FL	12 / 6	2 : 1		49 days
Savannah, GA	11 / 6	2 : 1		29 days
Toledo, OH	19 / 6	3 : 1		27 days
Waukegan, IL	18 / 6	3 : 1		40 days
Austell, GA	14 / 5	3 : 1		34 days
Bartow, FL	22 / 5	4 : 1		25 days
Marietta, GA	12 / 5	2 : 1		18 days
Mason, OH	8 / 5	2 : 1		29 days
Midland, GA	7 / 5	1 : 1		29 days
Panama City, FL	23 / 5	5 : 1		28 days
Peoria, IL	9 / 5	2 : 1		27 days
Akron, OH	5 / 4	1 : 1		26 days
Birmingham, AL	7 / 4	2 : 1		12 days
Canton, OH	10 / 4	3 : 1		44 days
Huntley, IL	9 / 4	2 : 1		29 days
Jonesboro, GA	11 / 4	3 : 1		43 days
Lake Forest, IL	18 / 4	5 : 1		25 days
Lakeland, FL	10 / 4	3 : 1		21 days
Maitland, FL	6 / 4	2 : 1		44 days
McHenry, IL	11 / 4	3 : 1		53 days
North Chicago, IL	16 / 4	4 : 1		35 days
Ocala, FL	12 / 4	3 : 1		31 days
Port Saint Lucie, FL	21 / 4	5 : 1		25 days
Seven Hills, OH	5 / 4	1 : 1		35 days

Top Posted Occupations



















	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Medical and Health Services Managers	3,530 / 961	4 : 1 	36 days

Top Posted Job Titles

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Program Managers (Management)	395 / 168	2 : 1	44 days
Medical Directors	821 / 158	5 : 1	40 days
Health Services Directors	286 / 89	3 : 1	43 days
Quality Directors	70 / 54	1 : 1	27 days
Clinical Managers (Management)	65 / 29	2 : 1	23 days
Division Directors	54 / 20	3 : 1	49 days
Chief Medical Officers	58 / 19	3 : 1	36 days
Vice Presidents	79 / 17	5 : 1	18 days
Patient Services Managers	68 / 16	4 : 1	25 days
Operations Managers (Management)	96 / 15	6 : 1	48 days
Public Health Analysts	56 / 15	4 : 1	20 days
Safety Directors (Management)	50 / 12	4 : 1	140 days
Training Consultants (Management)	35 / 12	3 : 1	18 days
Health Services Managers	67 / 12	6 : 1	18 days
Project Managers (Management)	47 / 11	4 : 1	38 days
Directors of Quality Improvement	65 / 11	6 : 1	74 days
Directors of Patient Care	42 / 11	4 : 1	34 days
Health Services Administrators	23 / 9	3 : 1	12 days
Research Directors	18 / 9	2 : 1	31 days
Outcomes Managers	33 / 8	4 : 1	65 days
Registered Nurses	13 / 8	2 : 1	30 days
Executive Directors	26 / 7	4 : 1	41 days
Planning Administrators	14 / 7	2 : 1	14 days
Care Managers	27 / 7	4 : 1	23 days
Systems Administrators	23 / 6	4 : 1	19 days
Physicians	29 / 6	5 : 1	41 days
Compliance Directors	32 / 5	6 : 1	48 days
Affairs Managers	8 / 5	2 : 1	21 days

Community Relations Directors	24 / 5	5 : 1		3 days
Behavioral Health Care Managers	25 / 5	5 : 1		54 days
Environmental Services Technicians (Life, Physical, and Social Science)	18 / 5	4 : 1		65 days
Research Analysts (Life, Physical, and Social Science)	19 / 5	4 : 1		26 days
Quality Improvement Nurses	6 / 5	1 : 1		54 days
Medical Center Managers	14 / 4	4 : 1		125 days
Client Services Managers	16 / 4	4 : 1		51 days
Directors of Research	8 / 3	3 : 1		45 days
School Directors	10 / 3	3 : 1		56 days
Directors of Nursing (Management)	12 / 3	4 : 1		33 days
Performance Improvement Managers	23 / 3	8 : 1		85 days
Directors of Quality Management	5 / 3	2 : 1		31 days
Child Care Center Directors	5 / 3	2 : 1		21 days
Managers of Emergency Services	12 / 3	4 : 1		62 days
Risk Managers (Management)	15 / 3	5 : 1		107 days
Practice Managers	3 / 3	1 : 1		122 days
Nurse Managers (Management)	13 / 3	4 : 1		4 days
Directors of Rehabilitation	13 / 3	4 : 1		34 days
Medical Science Liaisons	3 / 3	1 : 1		35 days
Health Science Instructors	9 / 3	3 : 1		33 days
Staff Nurses	4 / 3	1 : 1		3 days
Health and Wellness Directors	29 / 3	10 : 1		56 days

Top Industries

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Finance and Insurance	749 / 276	3 : 1 	35 days
Health Care and Social Assistance	773 / 190	4 : 1 	45 days
Public Administration	365 / 109	3 : 1 	20 days
Educational Services	334 / 94	4 : 1 	42 days
Professional, Scientific, and Technical Services	212 / 68	3 : 1 	31 days
Manufacturing	448 / 54	8 : 1 	36 days
Administrative and Support and Waste Management and Remediation Services	142 / 42	3 : 1 	43 days
Retail Trade	157 / 34	5 : 1 	54 days
Other Services (except Public Administration)	113 / 28	4 : 1 	66 days
Wholesale Trade	36 / 13	3 : 1 	29 days
Information	57 / 10	6 : 1 	67 days
Construction	25 / 8	3 : 1 	34 days
Mining, Quarrying, and Oil and Gas Extraction	8 / 3	3 : 1 	6 days
Management of Companies and Enterprises	4 / 3	1 : 1 	9 days
Agriculture, Forestry, Fishing and Hunting	15 / 2	8 : 1 	53 days
Real Estate and Rental and Leasing	7 / 2	4 : 1 	4 days
Arts, Entertainment, and Recreation	7 / 2	4 : 1 	29 days
Accommodation and Food Services	7 / 1	7 : 1 	86 days

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Emsi's job posting analytics, this comparison leverages Emsi's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

*The skills associated with workforce profiles represent workers of all education and experience levels.

Top Hard Skills



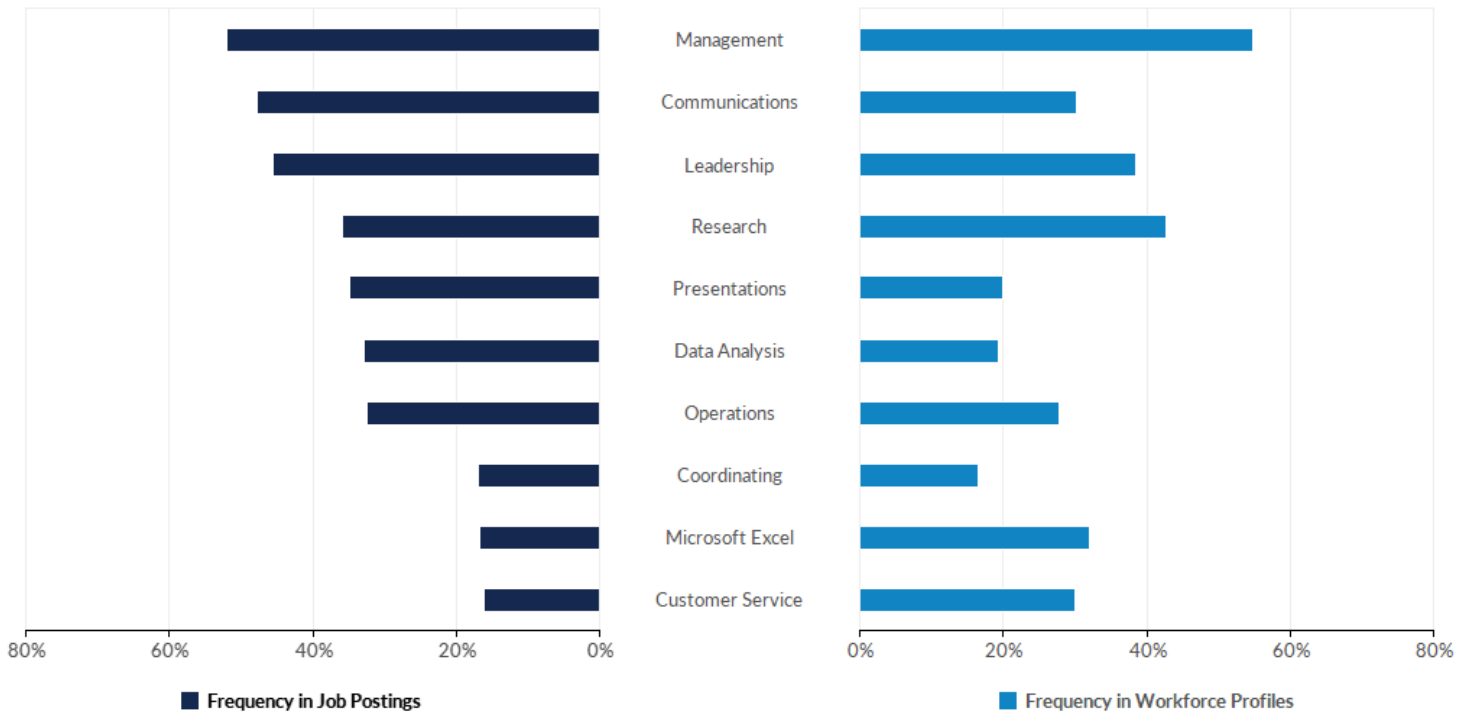
Top Hard Skills

	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Epidemiology	82%	789 / 961	37%	386 / 1,056
Public Health	40%	385 / 961	21%	227 / 1,056
Nursing	36%	349 / 961	7%	70 / 1,056
Medicare	28%	271 / 961	3%	30 / 1,056
Strategic Planning	25%	242 / 961	17%	177 / 1,056
Quality Management	24%	232 / 961	9%	90 / 1,056
Biostatistics	16%	155 / 961	5%	58 / 1,056
Healthcare Effectiveness Data And Information Set	15%	143 / 961	1%	7 / 1,056

Data Collection	14%	136 / 961	7%	70 / 1,056
Medical Management	13%	126 / 961	1%	6 / 1,056
Performance Improvement	13%	126 / 961	3%	35 / 1,056
Population Health	13%	126 / 961	1%	14 / 1,056
Quantitative Analysis	13%	123 / 961	0%	0 / 1,056
Infection Control	13%	122 / 961	2%	21 / 1,056
Medicaid	12%	113 / 961	3%	27 / 1,056
Clinical Practices	11%	110 / 961	1%	7 / 1,056
Health Sciences	11%	105 / 961	2%	18 / 1,056
Program Development	10%	98 / 961	6%	66 / 1,056
Budgeting	10%	98 / 961	15%	162 / 1,056
Economics	10%	96 / 961	4%	39 / 1,056
Auditing	10%	95 / 961	12%	122 / 1,056
Procurement	9%	89 / 961	4%	44 / 1,056
Regulatory Compliance	9%	89 / 961	2%	26 / 1,056
Health Education	9%	88 / 961	6%	61 / 1,056
Clinical Trials	9%	85 / 961	8%	82 / 1,056
Patient Safety	8%	81 / 961	4%	41 / 1,056
Community Health	8%	80 / 961	4%	44 / 1,056
New Product Development	8%	80 / 961	6%	67 / 1,056
Infectious Diseases	8%	78 / 961	7%	77 / 1,056
Public Health Nursing	8%	78 / 961	0%	0 / 1,056
Health Systems	8%	75 / 961	1%	12 / 1,056
Business Valuation	8%	74 / 961	0%	0 / 1,056
Medical Affairs	7%	72 / 961	1%	14 / 1,056
Strategic Procurement	7%	72 / 961	0%	0 / 1,056
Business Case	7%	72 / 961	1%	11 / 1,056
Treatment And Control Groups	7%	71 / 961	0%	0 / 1,056
Failure Causes	7%	70 / 961	0%	0 / 1,056

Market Trend	7%	69 / 961	0%	0 / 1,056
Milestones (Project Management)	7%	67 / 961	0%	0 / 1,056
Health Policies	7%	66 / 961	3%	32 / 1,056
Clinical Research	7%	65 / 961	18%	189 / 1,056
Health Economics and Outcomes Research (HEOR)	7%	64 / 961	0%	0 / 1,056
Pharmaceuticals	7%	63 / 961	4%	44 / 1,056
Electronic Medical Record	6%	62 / 961	6%	59 / 1,056
Tableau (Business Intelligence Software)	6%	62 / 961	2%	20 / 1,056
Outcomes Research	6%	61 / 961	1%	13 / 1,056
Risk Management	6%	60 / 961	7%	74 / 1,056
Business Process	6%	59 / 961	5%	51 / 1,056
Medical Records	6%	59 / 961	4%	44 / 1,056
Case Management	6%	58 / 961	3%	32 / 1,056

Top Common Skills



Top Common Skills

	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Management	52%	500 / 961	55%	579 / 1,056
Communications	48%	458 / 961	30%	320 / 1,056
Leadership	46%	438 / 961	39%	407 / 1,056
Research	36%	345 / 961	43%	452 / 1,056
Presentations	35%	335 / 961	20%	210 / 1,056
Data Analysis	33%	315 / 961	19%	205 / 1,056
Operations	32%	312 / 961	28%	294 / 1,056
Coordinating	17%	162 / 961	17%	175 / 1,056
Microsoft Excel	17%	160 / 961	32%	339 / 1,056
Customer Service	16%	154 / 961	30%	318 / 1,056
Program Management	14%	133 / 961	14%	146 / 1,056
Problem Solving	13%	121 / 961	9%	98 / 1,056
Business Administration	12%	120 / 961	8%	88 / 1,056

Integration	12%	119 / 961	7%	78 / 1,056
Microsoft PowerPoint	12%	116 / 961	24%	256 / 1,056
Decision Making	12%	114 / 961	4%	46 / 1,056
Innovation	11%	109 / 961	5%	49 / 1,056
Written Communication	10%	99 / 961	1%	14 / 1,056
Investigation	10%	95 / 961	7%	69 / 1,056
Mathematics	9%	88 / 961	5%	56 / 1,056
Writing	8%	78 / 961	12%	130 / 1,056
Organizational Skills	8%	75 / 961	0%	4 / 1,056
Sourcing	8%	75 / 961	2%	23 / 1,056
Microsoft Visio	7%	72 / 961	4%	43 / 1,056
Advocacy	7%	71 / 961	4%	39 / 1,056
Computer Literacy	7%	70 / 961	2%	19 / 1,056
Interpersonal Communications	7%	66 / 961	3%	30 / 1,056
Mentorship	7%	63 / 961	11%	120 / 1,056
Microsoft Outlook	5%	52 / 961	10%	103 / 1,056
Teamwork	5%	50 / 961	5%	55 / 1,056
Microsoft Word	5%	49 / 961	23%	246 / 1,056
Timelines	5%	48 / 961	2%	21 / 1,056
Information Technology	5%	47 / 961	6%	65 / 1,056
Training And Development	5%	47 / 961	7%	69 / 1,056
Collaboration	5%	47 / 961	0%	2 / 1,056
Professionalism	5%	46 / 961	1%	15 / 1,056
Word Processor	5%	46 / 961	1%	14 / 1,056
Microsoft Office	5%	46 / 961	32%	343 / 1,056
Detail Oriented	5%	46 / 961	4%	37 / 1,056
Scheduling	5%	45 / 961	8%	83 / 1,056
Spreadsheets	5%	44 / 961	3%	28 / 1,056
Valid Driver's License	4%	43 / 961	0%	0 / 1,056

Verbal Communication Skills	4%	43 / 961	1%	8 / 1,056
Teaching	4%	42 / 961	16%	171 / 1,056
Consulting	4%	39 / 961	17%	184 / 1,056
Sales	4%	35 / 961	30%	319 / 1,056
Critical Thinking	3%	33 / 961	2%	26 / 1,056
Quality Assurance	3%	32 / 961	8%	85 / 1,056
Prioritization	3%	32 / 961	0%	2 / 1,056
Negotiation	3%	30 / 961	10%	109 / 1,056

Top Qualifications

	Postings with Qualification
Advanced Pediatric Life Support	1
Advanced Practice Registered Nurse	2
ANCC Certified	2
Associates Degree In Nursing	2
Bachelor of Science in Nursing (BSN)	34
Board Certified In Internal Medicine	4
Certified Case Manager	9
Certified Emergency Nurse (CEN)	3
Certified Health Education Specialist	2
Certified Hemodialysis Nurse	2
Certified Investment Management Analyst	1
Certified Medical Transcriptionist	8
Certified Nursing Assistant	1
Certified Ophthalmic Assistant	2
Certified Plant Engineer	9
Certified Professional In Healthcare Quality	16
Certified Professional In Healthcare Risk Management	3
Certified Risk Analyst	1
Cisco Certified Internetwork Professional	2
CNOR Certification	3
Coder Certification	15
Commercial Driver's License (CDL)	2
Critical Care Registered Nurse (CCRN)	4
Doctor of Dental Medicine (DMD)	2
Doctor Of Dental Surgery (DDS)	2
Doctor Of Medicine (MD)	6
Doctor Of Pharmacy (PharmD)	51
Doctor Of Veterinary Medicine (DVM/VMD)	6

Fellow of the Society of Actuaries	1
Immunization Certification	1
Infection Control Certification	30
Licensed Clinical Social Worker (LCSW)	1
Licensed Healthcare Risk Manager	1
Licensed Marriage And Family Therapist (LMFT)	1
Licensed Master Social Worker	1
Licensed Practical Nurse	11
Licensed Professional Counselor (LPC)	1
Licensed Social Worker	4
Master Of Business Administration (MBA)	40
Medical License	75
Medical Technologist	1
National Council Licensure Examination	2
NHA Certified	1
Nurse Practitioner	8
Oncology Certified Nurse	3
Oracle Master Certification	1
Project Management Professional Certification	1
Six Sigma Green Belt Certification	6
Six Sigma Yellow Belt	1
Trauma Nurse Core Course (TNCC)	3

Appendix A

Top Posting Sources

Website	Postings on Website (Jan 2017 - Mar 2020)
Nexxt.com	267
Dejobs.org	148
Antheminc.com	134
Beyond.com	104
Employmentcrossing.com	99
Monster.com	88
My.jobs	86
Geebo.com	85
Illinois.gov	61
Myflorida.com	56
Glassdoor.com	54
Resume-library.com	48
Prodivnet.com	45
Jobvertise.com	40
Learn4good.com	38
Disabledperson.com	35
Jobs.net	33
Jobing.com	31
Jobserve.com	31
Careerbuilder.com	29
Careerboard.com	25
Americasjobexchange.com	23
Neuvoo.com	22
Nettemps.com	20
Jofdav.com	19

Appendix B

Sample Postings

Director, Health Equity Data Use and Research

Link to Live Job Posting: www.jobserve.com

Location: Chicago, IL

O*NET: 11-9111.00

Company: American Medical Association

Job Title: Health Services Directors

Director, Health Equity Data Use and Research Employer Name:

American Medical Association Description Director, Health Equity Data Use & Research Chicago, IL The American Medical Association (AMA), a nonprofit, is the nation's largest professional Association of physicians. We are a unifying voice and powerful ally for America's physicians, the patients they care for, and the promise of a healthier nation. To be part of the AMA is to be part of our Mission to promote the art and science of medicine and the betterment of public health. As an employer, we are dedicated to many efforts, including employee learning and development, social responsibility, diversity and inclusion and wellness. Our well-defined culture has strongly impacted the prosperity of our organization. Our foundational values of Respect, Integrity, Innovation, Impact, Collaboration, Agility and Trust are at the core of our efforts and continue to shape the success of the AMA. We have an opportunity at our headquarters in Chicago for a Director, Health Equity Data Use & Research on our Strategy team. As part of the team, you will support building a Center for Health Equity which will be an organizational home designed to elevate the importance of and to sustain the AMAs health equity efforts. The role of the Center for Health Equity is to embed health equity across the AMA so that health equity becomes part of the practice, process, action, innovation, and organizational performance and outcomes. The best measure of our long-term success and most desired outcome is meaningful, relevant, and impactful inclusion of health equity into the strategic and operational objectives of the AMA. You will be responsible for providing leadership and direction for multiple data and research related projects focused on establishing AMA reputation as a trusted source of data and knowledge of Health Equity. Identify and manage relationships with key collaborators and external stakeholders who can provide access to large public and private health databases and reporting capabilities relevant to Health Equitys strategic plan.

Responsibilities:

Provide leadership and build the roadmap for Health Equity data, research, and evaluation related projects:

- Define and lead the overall development and infrastructure of Health Equitys data and technical roadmap
- Build a team to support data, research, and evaluation needs that will inventory existing enterprise-wide health equity data, evaluation, and research efforts; work with the VP to assess data resources and gaps in the context of the VPs organizational goals/vision and the AMAs strategic goals, and develop and implement an evaluation and research agenda that advances the work of the unit and the AMA at large
- Develop an overall strategy and manage enterprise standards for identifying, assessing, accessing, analyzing and publishing relevant information from data sources
- Lead efforts to develop and publish relevant manuscripts, fact sheets, and data reports
- Translate and use data to strengthen advocacy/policy opportunities
- Data collection, analysis, and technical support:
 - Build a database to house, track, and evaluate progress on enterprise-wide efforts to embed equity in metrics and performance plans
 - Provide technical assistance in implementing an equity lens for Enterprise-wide multiple data-related projects involving large public and private health databases
 - Provide technical and analytical expertise on epidemiologic and statistical methods to lead the development and implementation of multivariate statistical analysis to evaluate the social, system, and structural level drivers of Health Equity
 - Conduct data for equity trainings to build and strengthen organizational capacity of other data, research, and evaluation staff across the enterprise
 - Lead and carry out multiple data-related projects involving large public and private health databases in support of Health Equitys strategy by gathering requirements, developing solutions, building reports, sharing findings and providing support to Health Equity project teams, AMA senior management and external collaborators
- Identify and manage relationships with key collaborators:
 - Identify and manage relationships with key collaborators, external stakeholders and consultants relevant to Health Equity
 - Develop relationships with internal groups to embed health equity across the AMA focusing on data use, analysis and reporting

Staff Management:

- Lead, mentor and provide management oversight for professional staff
- Responsible for setting objectives, evaluating performance and developing staff
- Identify opportunities for advancing staff skills and expertise

Requirements:

- Masters degree (MA/MS) or PHD with specialization in public health, social epidemiology, health economics or other related field required
- Minimum 10 years of experience in the field of data analytics, with knowledge of healthcare and/or public health information required; minimum 5+ years in health equity data, research and/or evaluation; must have a social and structural analysis to advance health equity with specific expertise in race, gender identity, and sexual orientation data collection and analysis
- Minimum 5 years of managing people and all facets of complex solution development projects to timeline and budget, including resource allocation management and resource modeling.
- Substantive experience in the analysis of complex health related studies, including, panel, cross-sectional, uni-variate and multivariate statistical techniques
- Substantive experience analyzing primary and secondary data, and a variety of data modalities (eg, surveillance data, claims, registries, electronic health records, survey responses, patient reported outcomes, observational studies and clinical trials, and national public health and/or health care databases)
- Proven track record in organizational leadership - preferably in complex, multi-disciplinary organizations and team-building and collaboration
- Experience establishing and maintaining collaborations with national stakeholders
- Ability to demonstrate understanding of machine learning and artificial intelligence in relation to predictive models.
- Experience with Big Data trends, tools, analytic, and modeling methodologies; experience with Big Data cloud based solutions a plus.
- Comfortable with presenting to others in a clear, concise, convincing manner.
- Excellent time management and organizational skills, including ability to accurately gauge project duration, deliver on deadlines, and manage a workload with possible conflicting priorities.

The AMA offers competitive salaries, including an incentive plan; excellent benefits and progressive technology. Our office is a business casual environment and we respect work-life balance. The American Medical Association is located at 330 N. Wabash Avenue, Chicago, IL 60611 and is convenient to all public transportation in Chicago. We are an equal opportunity employer, committed to diversity in our workforce.

All qualified applicants will receive consideration for employment.

As an EOE/AA employer, the American Medical Association will not discriminate in its employment practices due to an applicant's race, color, religion, sex, age, national origin, sexual orientation, gender identity and veteran or disability status.

THE AMA IS COMMITTED TO IMPROVING THE HEALTH OF THE NATION REQ ID

Associated topics: administrative, administrative assistant, administrative staff, assist, asso, beverage, document, front desk, food, records management Comments [Scientific Research] How to Apply Apply Here Be Diverse - Join Diversity.com Tweet Candidate

Registration _____ Name / Username

- Email
- Fields with (
-) are required!
- Send to a friend
- Your Name Your Email
- Friend's Name Friend's Email Subject Message

• Please complete all fields _____ Please type text shown in purple box.

+ Information +

Shown:

1 + Print Page + +

Date Posted:

03-29-2020 + Job Location +

City:

Chicago +

State:

ILLINOIS, IL

, +

Career Level:

Professionals / Managers +

Industry:

[Scientific Research] Health/Medicine/Pharmacology +

Country:

US +

Term:

Full Time + Apply Here + Company Profile + Keywords + Director, Health Equity Data Use and Research

Sr. Manager, Health Economics and Outcomes Research

Link to Live Job Posting: www.diversity.com

Location: Deerfield, IL

O*NET: 11-9111.00

Company: Baxter International Inc.

Job Title: Project Managers (Management)

Sr.

Manager, Health Economics and Outcomes Research Employer Name:

Baxter International Description Sr. Manager, Health Economics and Outcomes Research Req #: 18000C96

Location:

Deerfield,ILUSJob Category:

Market AccessDate Posted:

5/26/2019 8:55:44 PMBaxter InternationalAround the world, our employees are united by our mission to save and sustain lives. Together, we create a culture that encourages colleagues to pursue rewarding careers -- where everyone has the opportunity to do meaningful work as a part of a team they respect, in an environment that values each person s contributions. We re happy you re interested in continuing your career journey with Baxter.

Summary:

The Senior Manager , Health Economics and Outcomes Research (HEOR), is responsible for demonstrating a product s economic and humanistic value and developing deliverables that communicate this value to the complete range of external stakeholders, including patients, physicians, and payers. The Senior Manager applies his/her clinical and technical skills to conduct appropriate economic and quality of life analyses.

Essential Duties and Responsibilities:

Design and implement outcomes studies that establish the economic and humanistic value of Baxter productsAssess and integrate economic and patient-reported outcomes into clinical trialsAssess the psychometric properties of a quality of life instrument through FDA patient-reported outcomes guidance for labeling claims.

Develop economic models including, but not limited to, budget impact and cost effectiveness modelsDevelop economic dossiers and other reimbursement-supportive materialsCollaborate with the statistician on the statistical analysis of outcomes data using clinical trial and administrative databasesConduct outcomes research to a level such that results are suitable for presentation at scientific meetings and/or publication in peer-reviewed journals.

Communicate economic and quality of life value messages to internal and external stakeholders through presentation of outcomes research at medical meetings and through one-on-one interaction.

Proven expertise in designing, conducting, and interpreting outcomes research studies.

Qualifications:

Excellent interpersonal and communication skills Ability to understand and work with clinicians and marketers Working knowledge of reimbursement processes for devices and drugs in major international markets Exceptional project management skills Master's degree in health economics, pharmacy administration, epidemiology, public health, or equivalent Minimum 7 years of experience in health outcomes research with Master's degree Equal Employment Opportunity Baxter is an equal opportunity employer. Baxter evaluates qualified applicants without regard to race, color, religion, gender, national origin, age, sexual orientation, gender identity or expression, protected veteran status, disability/handicap status or any other legally protected characteristic.

EEO is the Law EEO is the law - Poster Supplement Pay Transparency Policy Reasonable Accommodations Baxter is committed to working with and providing reasonable accommodations to individuals with disabilities. If, because of a medical condition or disability, you need a reasonable accommodation for any part of the application or interview process, please send an e-mail to ...@baxter.com and let us know the nature of your request along with your contact information. Comments [Scientific Research] How to Apply Apply Here Be Diverse - Join Diversity.com Tweet Candidate Registration _____ Name / Username

- Email
- Fields with (
-) are required!
- Send to a friend
- Your Name Your Email
- Friend's Name Friend's Email Subject Message
- Please complete all fields _____ Please type text shown in purple box.

+ Information +

Shown:

2 + Print Page + +

Date Posted:

03-28-2020 + Job Location +

City:

Deerfield +

State:

ILLINOIS, IL

, +

Career Level:

Professionals / Managers +

Industry:

[Scientific Research] Health/Medicine/Pharmacology +

Country:

US +

Term:

Full Time + Apply Here + Company Profile + Keywords + Sr. Manager, Health Economics and Outcomes Research

Population Health Clinical Program Development Manager PS32064

Link to Live Job Posting: antheminc.jobs

Location: Pembroke Pines, FL

O*NET: 11-9111.00

Company: Anthem, Inc.

Job Title: Program Managers (Management)

Anthem, Inc. Population Health Clinical Program Development Manager PS32064 in Pembroke Pines, Florida Population Health Clinical Program Development Manager PS32064

Location:

United States Requisition #: PS32064

Post Date:

Mar 12, 2020 Your Talent. Our Vision. At Anthem, Inc., it's a powerful combination, and the foundation upon which we're creating greater access to care for our members, greater value for our customers, and greater health for our communities. Join us and together we will drive the future of health care. This is an exceptional opportunity to do innovative work that means more to you and those we serve at one of America's leading health benefits companies and a Fortune Top 50 Company. The Corporate Clinical Quality team is seeking an energetic, detailed, action driven associate to join our team as a Clinical Program Development Manager. This resource will be responsible for managing internal and external vendor relationships to execute clinical interventions aimed at ensuring members are receiving services to close clinical HEDIS gaps. This is an office based position

- Any Anthem location. Must be located within a commutable distance to an Anthem Office. This person will be responsible for the following:
- Creating business cases, cost and metric justifications for clinical interventions. Answering the questions of why the programs are beneficial to our members and what we can expect to achieve from implementing the program.
- Working closely with procurement and sourcing to create Statements of Work outlining key performance metrics, asking detailed vendor questions around capabilities and expectations.
- Maintains effective documentation of research programs to meet regulatory and Accreditation Standards.
- Deep understanding of process flows, sequential steps, and critical path milestones.
- Familiar and accustomed to reporting out project status and details, managing risks and communicating with manager on projects.
- Create aggressive metrics and achieve performance metrics for assigned programs.
- Understand and calculate expected Stars/rate lift from intervention.
- Work closely with evaluation team to ensure proper control groups are established and data is available. Ensures accurate and complete quantitative analysis of clinical data and presentation of data analysis results.
- Working closely with various stakeholders across matrixed organization such as: (Finance, Actuarial, Procurement, Strategy, Reporting, Regulatory, Compliance).
- Assures timely and accurate project deliverables.
- Manages and promotes project management efficiency and improvements.
- Embraces and researches external industry and market trends. Must be well versed in the following:
- HEDIS, Medicare, STARs measurement
- Mathematics
- must be able to complete formulas and data analysis using Excel and Tableau to calculate cost estimates, business value
- Project management of large complex programs.
- PowerPoint

- creating presentations on business case, progress, and outcomes.
- Visio
- must be able to create detailed process flows around process steps and data flows
- Member behaviors, ensuring programs achieve optimal feedback from our members. Must keep Anthem's members in mind at all times.
- Failure Modes Effect Analysis
- ensuring mitigation of project mishaps are identified and plan is in place to prevent them.
- Customer service focused
- Compliance focused Requires a BA in business, public health, nursing, epidemiology biostatistics, or related field; 5 years of experience involving analyses of health care data and clinical program development; or any combination of education and experience, which would provide an equivalent background.

MS in public health, health services administration, nursing, or business administration preferred. Anthem, Inc. is ranked as one of America's Most Admired Companies among health insurers by Fortune magazine and is a 2018 DiversityInc magazine Top 50 Company for Diversity. To learn more about our company and apply, please visit us at careers.antheminc.com. An Equal Opportunity Employer/Disability/Veteran.

Senior Administrative Director of Quality Improvement, RN at Clinical Management Consultants

Link to Live Job Posting: Posting is no longer active

Location: Oviedo, FL

O*NET: 11-9111.00

Company: Clinical Management Consultants

Job Title: Directors of Quality Improvement

Senior Administrative Director of Quality Improvement, RN at Clinical Management Consultants Oviedo, FL Clinical Management Consultants A highly recognized hospital in Central Florida is seeking an experienced Senior Director of Patient Care & Quality Improvement. This individual will be the change agent at this growing hospital; executing performance improvement initiatives, enhancing patient care programs, and constantly collaborating with multidisciplinary teams. The Senior Director of Patient Care & Quality Improvement will join a team at a facility dedicated to delivering exceptional patient care throughout the community. This acute care hospital continues to expand daily, bringing on new leaders who are excited to spearhead new initiatives, and ultimately grow with the hospital. With cutting edge medical technology and services offered, this facility is able to accommodate a wide array of specialized services throughout the community; including a Level II Trauma Center. The Senior Director of Patient Care & Quality Improvement will join the Hospital's executive leadership administrative team, working in concert with the Chief Quality Medical Officer and Chief Nursing Officer. The Patient Care & Quality Improvement Director is responsible for overseeing performance improvement, patient safety, infection control, regulation compliance, and hospital accreditation initiatives. The Senior Director of Patient Care & Quality Improvement will oversee a team of directors and managers that focus on quality improvement, patient safety, infection control, regulatory compliance, and maintaining the hospital accreditation programs. In addition, the Senior Director of Quality Improvement will be responsible for developing, facilitating, evaluating, and overseeing data collection, data analysis, surveying, measurement, validation and reporting to the regulatory agencies, ensuring total compliance throughout the organization. With a Quality Improvement Management background, the Senior Director of Patient Care, Quality Improvement must also have a comprehensive knowledge of the healthcare industry, familiarity with government regulations on healthcare plans, strategic planning skills, and a clear understanding of operations within a healthcare organization. Located in the heart of Seminole County, the Senior Director will be joining a vibrant community with a vast array of outdoor entertainment, sports, art, and historic centers. Just a short drive to the Atlantic Coast, Ocala National Forest, and the bustle of Orlando, this is a prime location for a senior leader in quality to settle down in a senior executive role. The hospital is looking for a highly experienced individual who is confident executing performance improvement initiatives, leading and supporting multidisciplinary teams, and is ready to be the change agent at this growing hospital. The Senior Director will be masters prepared, currently holding Quality or Performance Improvement title, with strong tenure and leadership experience. Join the executive administrative leadership team at this highly accredited hospital as the Senior Director of Patient Care & Quality Improvement. This rapidly growing hospital is looking for an experienced leader, offering a highly competitive salary with a full suite of benefits and a potential relocation bonus. monsterboost5000

Senior Nurse Director of Quality and Performance Improvement, RN at Clinical Management Consultants

Link to Live Job Posting: Posting is no longer active

Location: Orange City, FL

O*NET: 11-9111.00

Company: Clinical Management Consultants

Job Title: Quality Improvement Nurses

Senior Nurse Director of Quality and Performance Improvement, RN at Clinical Management Consultants Orange City, FL Clinical Management Consultants A highly recognized hospital in Central Florida is seeking an experienced Senior Director of Patient Care & Quality Improvement. This individual will be the change agent at this growing hospital; executing performance improvement initiatives, enhancing patient care programs, and constantly collaborating with multidisciplinary teams. The Senior Director of Patient Care & Quality Improvement will join a team at a facility dedicated to delivering exceptional patient care throughout the community. This acute care hospital continues to expand daily, bringing on new leaders who are excited to spearhead new initiatives, and ultimately grow with the hospital. With cutting edge medical technology and services offered, this facility is able to accommodate a wide array of specialized services throughout the community; including a Level II Trauma Center. The Senior Director of Patient Care & Quality Improvement will join the Hospital's executive leadership administrative team, working in concert with the Chief Quality Medical Officer and Chief Nursing Officer. The Patient Care & Quality Improvement Director is responsible for overseeing performance improvement, patient safety, infection control, regulation compliance, and hospital accreditation initiatives. The Senior Director of Patient Care & Quality Improvement will oversee a team of directors and managers that focus on quality improvement, patient safety, infection control, regulatory compliance, and maintaining the hospital accreditation programs. In addition, the Senior Director of Quality Improvement will be responsible for developing, facilitating, evaluating, and overseeing data collection, data analysis, surveying, measurement, validation and reporting to the regulatory agencies, ensuring total compliance throughout the organization. With a Quality Improvement Management background, the Senior Director of Patient Care, Quality Improvement must also have a comprehensive knowledge of the healthcare industry, familiarity with government regulations on healthcare plans, strategic planning skills, and a clear understanding of operations within a healthcare organization. Located in the heart of Seminole County, the Senior Director will be joining a vibrant community with a vast array of outdoor entertainment, sports, art, and historic centers. Just a short drive to the Atlantic Coast, Ocala National Forest, and the bustle of Orlando, this is a prime location for a senior leader in quality to settle down in a senior executive role. The hospital is looking for a highly experienced individual who is confident executing performance improvement initiatives, leading and supporting multidisciplinary teams, and is ready to be the change agent at this growing hospital. The Senior Director will be masters prepared, currently holding Quality or Performance Improvement title, with strong tenure and leadership experience. Join the executive administrative leadership team at this highly accredited hospital as the Senior Director of Patient Care & Quality Improvement. This rapidly growing hospital is looking for an experienced leader, offering a highly competitive salary with a full suite of benefits and a potential relocation bonus. monsterboost5000

Appendix C - Data Sources and Calculations

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Industrial Relations; Florida Department of Economic Opportunity; Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit; Illinois Department of Employment Security, Employment Projections; Indiana Department of Workforce Development; Kentucky Office of Employment and Training; Ohio Department of Job and Family Services, Labor Market Information Division; Tennessee Department of Labor and Workforce Development, Research and Statistics Division

Job Posting Analytics

Emsi Q2 2020 Data Set

April 2020

Kentucky

Parameters

Regions

Code	Description
1	Alabama
12	Florida
13	Georgia
17	Illinois

Code	Description
18	Indiana
21	Kentucky
39	Ohio
47	Tennessee

Skills & Qualifications

Results should include any of the selected skills

Code	Skills & Qualifications
Hard Skill	Epidemiology
Hard Skill	Epidemiological Method
Hard Skill	Genetic Epidemiology
Hard Skill	Clinical Surveillance
Hard Skill	Public Surveillance
Hard Skill	Disease Surveillance
Hard Skill	Surveying
Hard Skill	National Electronic Disease Surveillance Systems

Code	Skills & Qualifications
Hard Skill	Behavioral Risk Factor Surveillance Systems
Hard Skill	Field Surveys
Hard Skill	Survey Data Collection
Hard Skill	Online Surveys (Evaluation Methods)
Hard Skill	Public Survey
Hard Skill	Survey Sampling
Hard Skill	Statistical Survey

Industry Sector (2-Digit)

Results should include

Code	Industry Sector (2-Digit)
62	Health Care and Social Assistance

Minimum Experience Required

Any

Education Level

Description
Bachelor's degree

Keyword Search

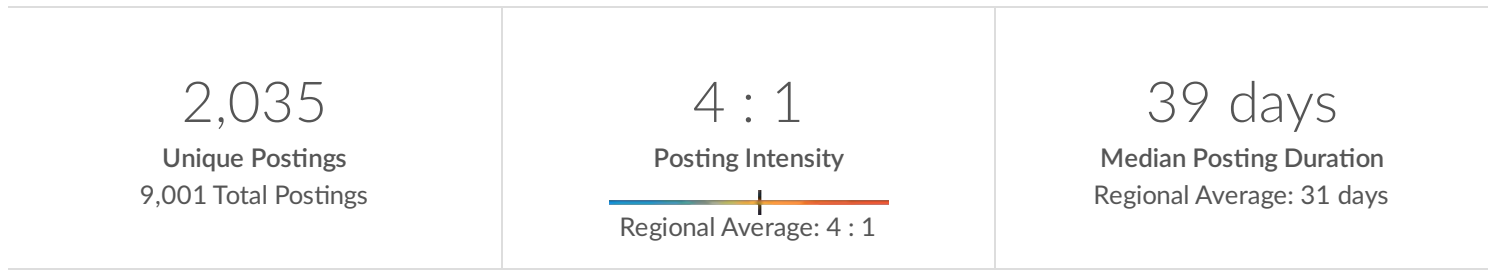
Timeframe

Jan 2017 - Mar 2020

Posting Lifespan

Any Duration

Job Postings Summary



There were 9,001 total job postings for your selection from January 2017 to March 2020, of which 2,035 were unique. These numbers give us a Posting Intensity of 4-to-1, meaning that for every 4 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that they are putting average effort toward hiring for this position.

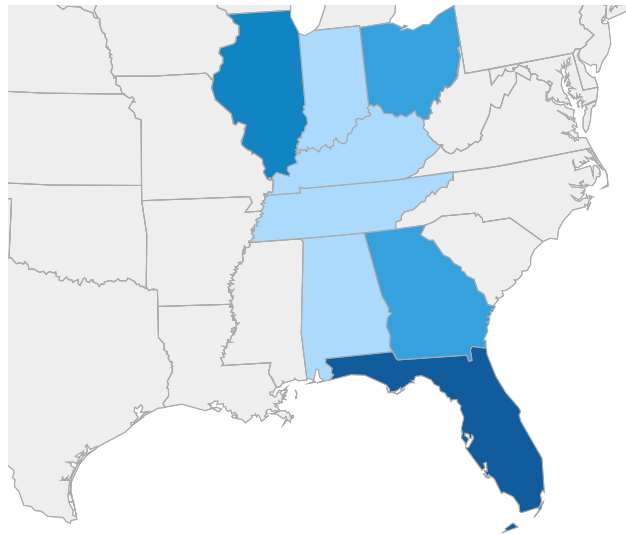
Advertised Salary

There are 269 advertised salary observations (13% of the 2,035 matching postings).

\$61.8K
Median Advertised Salary

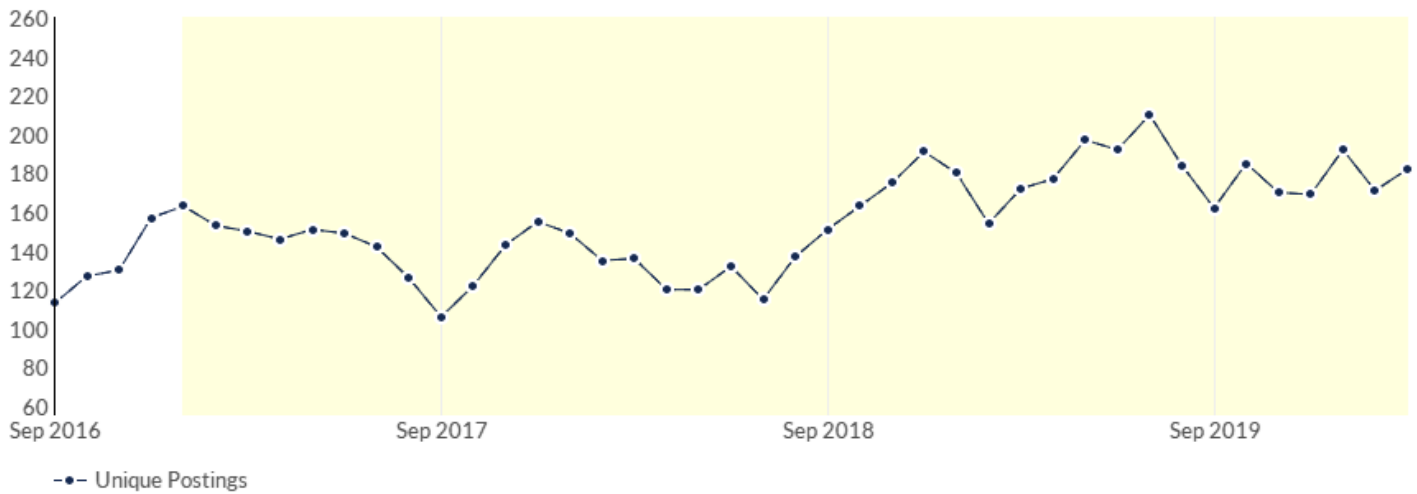


Job Postings Regional Breakdown



State	Unique Postings (Jan 2017 - Mar 2020)
Florida	586
Illinois	482
Georgia	334
Ohio	280
Tennessee	142

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Sep 2016	113	4 : 1
Oct 2016	127	5 : 1
Nov 2016	130	5 : 1
Dec 2016	157	5 : 1
Jan 2017	163	5 : 1
Feb 2017	153	5 : 1
Mar 2017	150	6 : 1
Apr 2017	146	5 : 1
May 2017	151	5 : 1
Jun 2017	149	5 : 1
Jul 2017	142	6 : 1
Aug 2017	126	6 : 1
Sep 2017	106	7 : 1
Oct 2017	122	7 : 1
Nov 2017	143	6 : 1
Dec 2017	155	5 : 1
Jan 2018	149	5 : 1
Feb 2018	135	5 : 1
Mar 2018	136	5 : 1
Apr 2018	120	5 : 1

May 2018	120	6 : 1
Jun 2018	132	6 : 1
Jul 2018	115	6 : 1
Aug 2018	137	6 : 1
Sep 2018	151	5 : 1
Oct 2018	163	6 : 1
Nov 2018	175	5 : 1
Dec 2018	191	5 : 1
Jan 2019	180	5 : 1
Feb 2019	154	5 : 1
Mar 2019	172	6 : 1
Apr 2019	177	6 : 1
May 2019	197	6 : 1
Jun 2019	192	5 : 1
Jul 2019	210	6 : 1
Aug 2019	184	6 : 1
Sep 2019	162	6 : 1
Oct 2019	185	6 : 1
Nov 2019	170	7 : 1
Dec 2019	169	7 : 1
Jan 2020	192	7 : 1
Feb 2020	171	8 : 1
Mar 2020	182	9 : 1






Education & Experience Breakdown

Education Level	Unique Postings	% of Total
Unspecified	0	0%
High school or GED	142	7%
Associate's degree	305	15%
Bachelor's degree	2,035	100%
Master's degree	873	43%
Ph.D. or professional degree	154	8%

Minimum Experience	Unique Postings	% of Total
No experience listed	320	16%
0 - 1 Years	547	27%
2 - 3 Years	812	40%
4 - 6 Years	318	16%
7 - 9 Years	17	1%
10+ Years	21	1%

Top Companies Posting

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Rush University	299 / 85	4 : 1 	41 days
HCA Holdings, Inc.	461 / 73	6 : 1 	44 days
Moffitt Cancer Center	175 / 70	3 : 1 	46 days
The Centers Inc	612 / 60	10 : 1 	29 days
Kindred Healthcare, Inc.	425 / 56	8 : 1 	49 days
Evolent Health, Inc.	202 / 51	4 : 1 	56 days
Southeast Georgia Health Systems, Inc.	306 / 42	7 : 1 	42 days
Nationwide Children's Hospital	123 / 37	3 : 1 	40 days
Broward Health	83 / 32	3 : 1 	46 days
Ohiohealth Corporation	121 / 31	4 : 1 	39 days
Adventist Health System	199 / 26	8 : 1 	34 days
The Cleveland Clinic Foundation	116 / 25	5 : 1 	24 days
Northside Hospital, Inc.	161 / 25	6 : 1 	35 days
Wellstar Health System, Inc.	122 / 24	5 : 1 	49 days
Advocate Health and Hospitals Corporation	66 / 22	3 : 1 	35 days
Ascension Health	90 / 21	4 : 1 	28 days
Centegra Health System	41 / 21	2 : 1 	39 days
University Hospitals of Cleveland	91 / 21	4 : 1 	46 days
Unitypoint Health	83 / 21	4 : 1 	49 days
Lees Health LLC	103 / 20	5 : 1 	44 days
Orlando Health, Inc.	115 / 19	6 : 1 	41 days
Tenet Healthcare Corporation	85 / 19	4 : 1 	56 days
Northwestern Memorial Hospital	65 / 19	3 : 1 	33 days
Ohio E	63 / 18	4 : 1 	14 days
Osf Healthcare	43 / 18	2 : 1 	31 days
Piedmont Hospital, Inc.	64 / 17	4 : 1 	44 days
Mercy Health	57 / 16	4 : 1 	42 days
Catholic Health Initiatives	93 / 16	6 : 1 	54 days

Presence Health	94 / 16	6 : 1		42 days
Children's Healthcare of Atlanta, Inc.	43 / 15	3 : 1		42 days
Amita Home Health Inc	95 / 15	6 : 1		23 days
Baptist Health	29 / 14	2 : 1		13 days
Baycare Home Care, Inc.	60 / 13	5 : 1		21 days
Mayo Clinic	97 / 13	7 : 1		38 days
Sinai Health System	29 / 13	2 : 1		16 days
Covenant Health	43 / 13	3 : 1		43 days
Community Health Systems, Inc.	49 / 13	4 : 1		41 days
Ohio Department of Health	47 / 12	4 : 1		19 days
Save The Family Foundation of Arizona	28 / 11	3 : 1		63 days
The Children's Home Society of Florida	11 / 11	1 : 1		13 days
Kaiser Permanente	64 / 10	6 : 1		69 days
Law Crossing	10 / 10	1 : 1		2 days
Fhi 360	13 / 10	1 : 1		78 days
Vibra Healthcare, LLC	35 / 9	4 : 1		48 days
Dekalb Medical Center, Inc.	64 / 9	7 : 1		45 days
Northwestern Medical Center, Inc.	44 / 9	5 : 1		28 days
Correct Care Solutions, LLC	81 / 9	9 : 1		66 days
Northern Kentucky Independent District Health Department	25 / 9	3 : 1		22 days
Florida Hospital	197 / 9	22 : 1		92 days
Grady Health System	164 / 8	21 : 1		63 days

Top Cities Posting

City	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Chicago, IL	966 / 261	4 : 1	43 days
Atlanta, GA	1,277 / 160	8 : 1	46 days
Tampa, FL	326 / 98	3 : 1	46 days
Columbus, OH	361 / 89	4 : 1	40 days
Orlando, FL	510 / 50	10 : 1	53 days
Fort Lauderdale, FL	124 / 45	3 : 1	47 days
Nashville, TN	281 / 43	7 : 1	32 days
Indianapolis, IN	145 / 35	4 : 1	32 days
Cleveland, OH	159 / 32	5 : 1	42 days
Jacksonville, FL	168 / 32	5 : 1	21 days
Miami, FL	151 / 32	5 : 1	39 days
Memphis, TN	229 / 29	8 : 1	53 days
Louisville, KY	145 / 28	5 : 1	49 days
Cincinnati, OH	145 / 26	6 : 1	48 days
Gainesville, FL	79 / 25	3 : 1	51 days
Fort Myers, FL	108 / 23	5 : 1	51 days
Saint Petersburg, FL	87 / 21	4 : 1	45 days
McHenry, IL	49 / 20	2 : 1	44 days
Savannah, GA	57 / 16	4 : 1	16 days
Akron, OH	91 / 14	7 : 1	13 days
Peoria, IL	56 / 14	4 : 1	11 days
Altamonte Springs, FL	38 / 13	3 : 1	40 days
Birmingham, AL	130 / 13	10 : 1	45 days
Dayton, OH	31 / 12	3 : 1	20 days
Kissimmee, FL	131 / 12	11 : 1	41 days
Knoxville, TN	33 / 12	3 : 1	30 days

Augusta, GA	72 / 11	7 : 1		23 days
Decatur, GA	37 / 11	3 : 1		27 days
Hollywood, FL	34 / 11	3 : 1		22 days
Marietta, GA	59 / 11	5 : 1		47 days
Mobile, AL	28 / 11	3 : 1		48 days
Pompano Beach, FL	30 / 11	3 : 1		37 days
Brentwood, TN	46 / 10	5 : 1		54 days
Florence, KY	31 / 10	3 : 1		22 days
Fort Wayne, IN	53 / 10	5 : 1		34 days
Toledo, OH	31 / 10	3 : 1		34 days
Buckhead, GA	13 / 9	1 : 1		31 days
Rock Island, IL	33 / 9	4 : 1		49 days
Athens, GA	33 / 8	4 : 1		63 days
Huntley, IL	19 / 8	2 : 1		29 days
Montgomery, AL	12 / 8	2 : 1		25 days
Urbana, IL	25 / 8	3 : 1		55 days
Arlington Heights, IL	11 / 7	2 : 1		61 days
Chattanooga, TN	24 / 7	3 : 1		16 days
Daytona Beach, FL	26 / 7	4 : 1		58 days
Lexington, KY	28 / 7	4 : 1		18 days
Naples, FL	12 / 7	2 : 1		37 days
Rockford, IL	20 / 7	3 : 1		56 days
West Palm Beach, FL	35 / 7	5 : 1		77 days
Boca Raton, FL	32 / 6	5 : 1		24 days








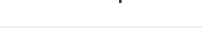














Top Posted Occupations

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Registered Nurses	3,655 / 780	5 : 1	41 days
Epidemiologists	587 / 97	6 : 1	35 days
Medical and Health Services Managers	353 / 88	4 : 1	31 days
Management Analysts	323 / 85	4 : 1	45 days
Natural Sciences Managers	243 / 63	4 : 1	33 days
Statisticians	257 / 56	5 : 1	44 days
Medical Scientists, Except Epidemiologists	263 / 51	5 : 1	40 days
Computer Systems Analysts	166 / 48	3 : 1	42 days
Social and Human Service Assistants	108 / 41	3 : 1	30 days
Managers, All Other	107 / 36	3 : 1	50 days
Civil Engineers	117 / 33	4 : 1	41 days
Occupational Health and Safety Specialists	127 / 32	4 : 1	19 days
Postsecondary Teachers	68 / 31	2 : 1	31 days
Market Research Analysts and Marketing Specialists	123 / 30	4 : 1	58 days
Environmental Scientists and Specialists, Including Health	233 / 29	8 : 1	32 days
Social Science Research Assistants	79 / 29	3 : 1	26 days
Medical Records and Health Information Technicians	102 / 23	4 : 1	37 days
Computer Occupations, All Other	61 / 20	3 : 1	34 days
Clinical Laboratory Technologists and Technicians	81 / 19	4 : 1	52 days
Business Operations Specialists, All Other	52 / 16	3 : 1	53 days
Nursing Assistants	269 / 16	17 : 1	24 days
Human Resources Specialists	50 / 15	3 : 1	42 days
Social and Community Service Managers	72 / 12	6 : 1	32 days
Human Resources Managers	33 / 11	3 : 1	40 days
Compensation, Benefits, and Job Analysis Specialists	20 / 11	2 : 1	37 days
Medical Assistants	50 / 10	5 : 1	52 days
Compliance Officers	27 / 9	3 : 1	13 days
Training and Development Specialists	37 / 9	4 : 1	62 days


Operations Research Analysts	31 / 9	3 : 1		54 days
Mental Health and Substance Abuse Social Workers	16 / 9	2 : 1		13 days
Health Educators	31 / 9	3 : 1		16 days
General and Operations Managers	25 / 8	3 : 1		31 days
Training and Development Managers	10 / 8	1 : 1		81 days
Computer User Support Specialists	34 / 8	4 : 1		35 days
Family and General Practitioners	11 / 8	1 : 1		10 days
Computer and Information Systems Managers	31 / 7	4 : 1		41 days
Software Developers, Applications	35 / 7	5 : 1		51 days
Surveyors	14 / 7	2 : 1		35 days
Dietitians and Nutritionists	28 / 7	4 : 1		35 days
First-Line Supervisors of Office and Administrative Support Workers	20 / 7	3 : 1		13 days
Marketing Managers	45 / 6	8 : 1		33 days
Industrial Production Managers	17 / 6	3 : 1		19 days
Web Developers	29 / 6	5 : 1		10 days
Industrial Engineers	10 / 6	2 : 1		36 days
Civil Engineering Technicians	35 / 6	6 : 1		16 days
Environmental Science and Protection Technicians, Including Health	18 / 6	3 : 1		16 days
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	15 / 5	3 : 1		51 days
Public Relations Specialists	5 / 5	1 : 1		11 days
Emergency Medical Technicians and Paramedics	33 / 5	7 : 1		11 days
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	15 / 5	3 : 1		56 days

Top Posted Job Titles

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Registered Nurses	1,827 / 399	5 : 1	39 days
Employee Health Nurses	676 / 124	5 : 1	40 days
Staff Nurses	450 / 102	4 : 1	50 days
Research Analysts (Life, Physical, and Social Science)	212 / 67	3 : 1	39 days
Epidemiologists	405 / 48	8 : 1	31 days
Program Managers (Management)	204 / 35	6 : 1	39 days
Clinical Research Coordinators	113 / 30	4 : 1	36 days
Research Assistants	67 / 28	2 : 1	26 days
Data Analysts	122 / 24	5 : 1	51 days
Environmental Specialists (Life, Physical, and Social Science)	77 / 21	4 : 1	19 days
Nurse Practitioners	72 / 20	4 : 1	34 days
Patient Care Technicians (Healthcare Practitioners and Technical)	393 / 19	21 : 1	57 days
Health and Safety Officers	83 / 19	4 : 1	19 days
Health and Wellness Directors	72 / 17	4 : 1	59 days
Informatics Analysts	59 / 16	4 : 1	33 days
Public Health Analysts	67 / 16	4 : 1	16 days
Project Managers (Management)	63 / 15	4 : 1	44 days
Directors of Analytics	46 / 14	3 : 1	50 days
Business Analysts (Business and Financial Operations)	47 / 14	3 : 1	45 days
Patient Services Managers	64 / 13	5 : 1	23 days
Nurse Educators (Healthcare Practitioners and Technical)	52 / 13	4 : 1	43 days
Civil Engineers	52 / 12	4 : 1	41 days
Research Coordinators (Life, Physical, and Social Science)	42 / 12	4 : 1	42 days
Research Scientists	99 / 12	8 : 1	35 days
Registrars (Healthcare Practitioners and Technical)	28 / 12	2 : 1	39 days
Nurse Managers (Healthcare Practitioners and Technical)	21 / 12	2 : 1	25 days
Administrative Assistants	54 / 12	5 : 1	43 days
Medical Technologists	62 / 11	6 : 1	49 days

Nursing Staff Development Coordinators	28 / 11	3 : 1		47 days
Directors of Patient Care	37 / 10	4 : 1		34 days
Recruiters	32 / 10	3 : 1		59 days
Training and Development Specialists	36 / 10	4 : 1		38 days
IT Quality Assurance Analysts	25 / 10	3 : 1		47 days
Research Specialists	42 / 10	4 : 1		53 days
Visiting Professors	10 / 10	1 : 1		2 days
Minimum Data Set (MDS) Coordinators	56 / 10	6 : 1		31 days
Occupational Health Nurses	32 / 10	3 : 1		25 days
Physicians	22 / 10	2 : 1		10 days
Learning Managers	12 / 9	1 : 1		81 days
Compensation Analysts (Business and Financial Operations)	16 / 9	2 : 1		39 days
Design Engineers (Architecture and Engineering)	31 / 9	3 : 1		54 days
Postdoctoral Research Fellows	30 / 9	3 : 1		42 days
Quality Improvement Nurses	34 / 9	4 : 1		62 days
Clinical Managers (Management)	23 / 8	3 : 1		54 days
Biostatisticians	32 / 8	4 : 1		65 days
Research Associates (Life, Physical, and Social Science)	18 / 8	2 : 1		30 days
Patient Care Coordinators	26 / 8	3 : 1		63 days
Outcomes Managers	32 / 7	5 : 1		13 days
Support Analysts	17 / 7	2 : 1		26 days
Surveyors	14 / 7	2 : 1		35 days

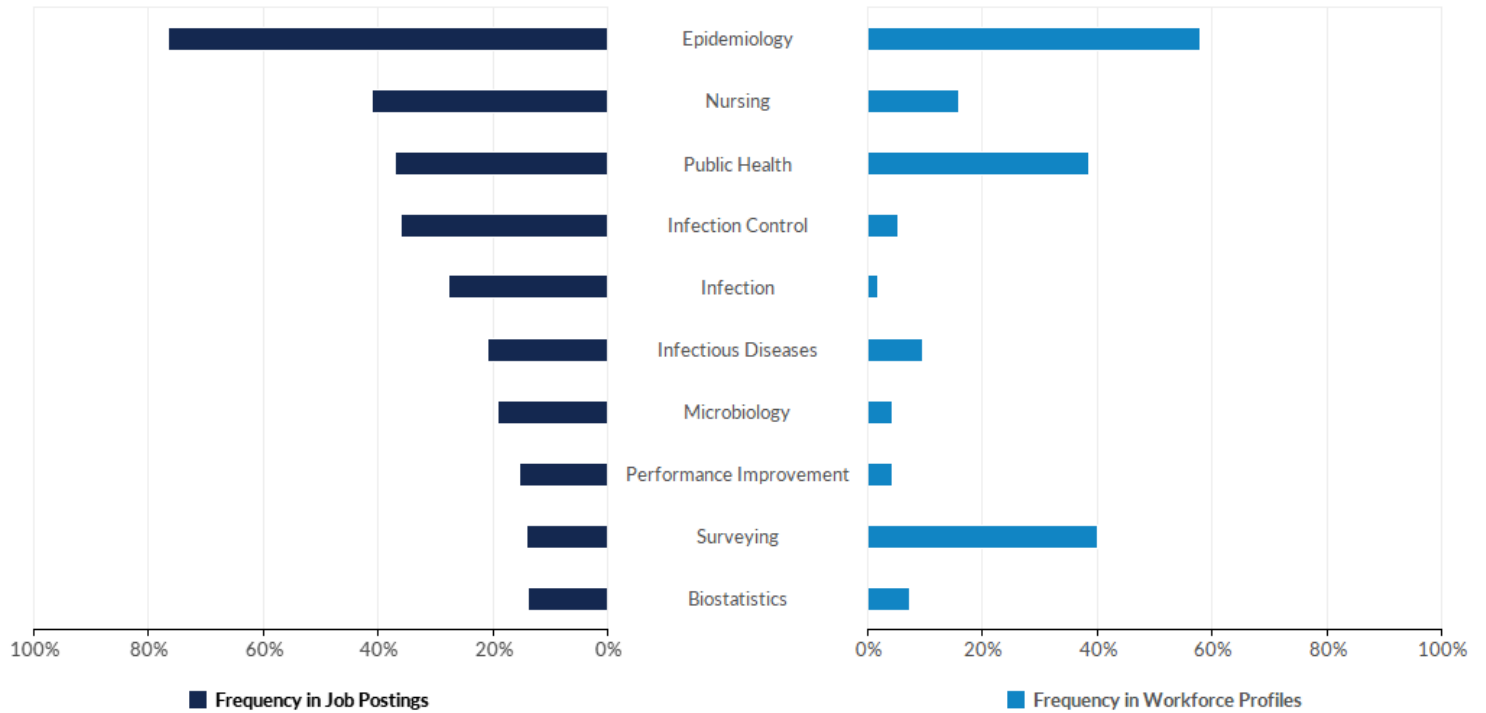
Top Industries

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Health Care and Social Assistance	9,001 / 2,035	4 : 1 	39 days

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Emsi's job posting analytics, this comparison leverages Emsi's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

*The skills associated with workforce profiles represent workers of all education and experience levels.

Top Hard Skills



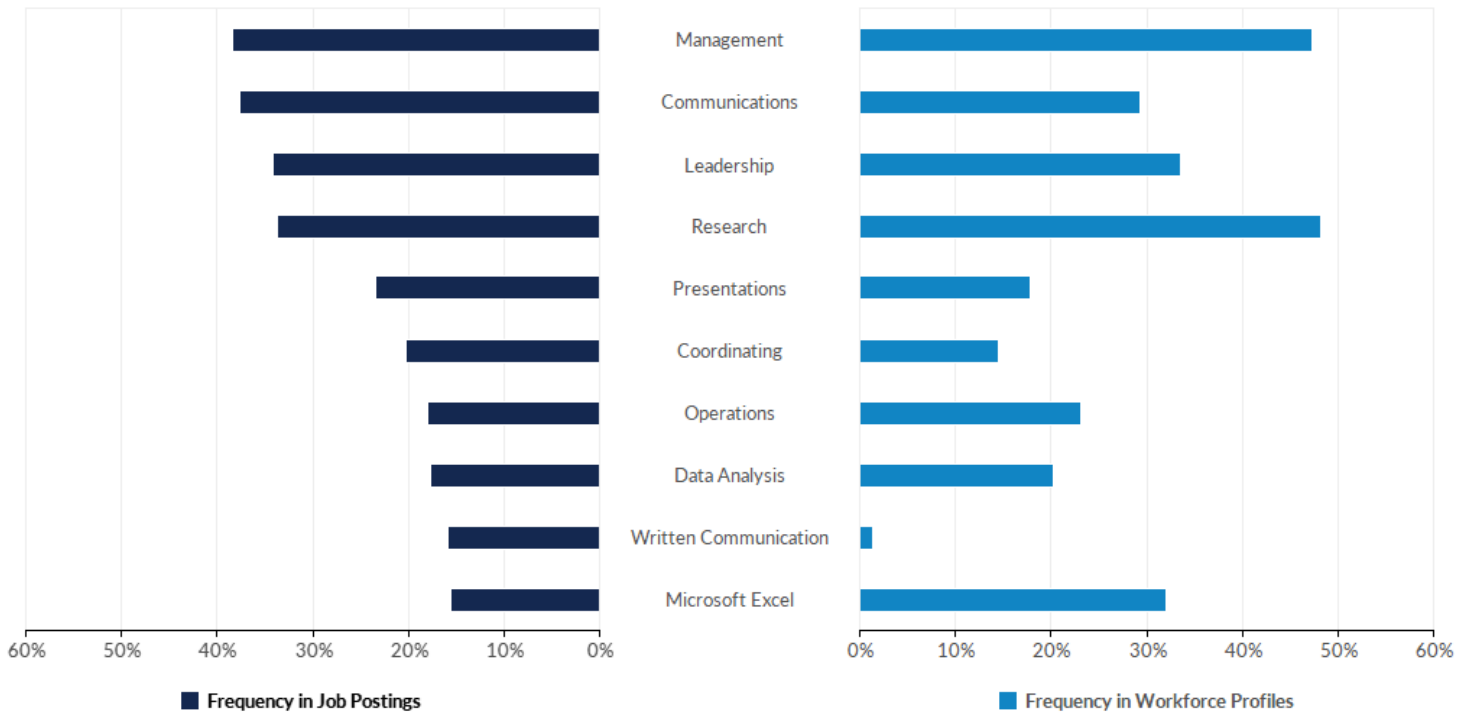
Top Hard Skills

	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Epidemiology	77%	1,557 / 2,035	58%	6,692 / 11,556
Nursing	41%	836 / 2,035	16%	1,828 / 11,556
Public Health	37%	754 / 2,035	38%	4,442 / 11,556
Infection Control	36%	735 / 2,035	5%	612 / 11,556
Infection	28%	566 / 2,035	2%	213 / 11,556
Infectious Diseases	21%	425 / 2,035	9%	1,094 / 11,556
Microbiology	19%	392 / 2,035	4%	505 / 11,556
Performance Improvement	15%	312 / 2,035	4%	483 / 11,556

Surveying	14%	286 / 2,035	40%	4,633 / 11,556
Biostatistics	14%	280 / 2,035	7%	839 / 11,556
Communicable Diseases	13%	273 / 2,035	1%	69 / 11,556
Data Collection	13%	257 / 2,035	7%	861 / 11,556
Biology	12%	241 / 2,035	7%	789 / 11,556
SAS (Software)	11%	221 / 2,035	7%	776 / 11,556
Acute Care	11%	220 / 2,035	5%	559 / 11,556
Sterilization	10%	201 / 2,035	1%	93 / 11,556
Quality Management	10%	198 / 2,035	10%	1,133 / 11,556
Health Technology	9%	180 / 2,035	1%	95 / 11,556
Health Sciences	8%	166 / 2,035	3%	342 / 11,556
Medical Records	7%	151 / 2,035	11%	1,325 / 11,556
Strategic Planning	7%	146 / 2,035	15%	1,702 / 11,556
Statistics	7%	146 / 2,035	3%	347 / 11,556
Adult Education	7%	143 / 2,035	1%	161 / 11,556
Patient Safety	7%	138 / 2,035	11%	1,258 / 11,556
Auditing	7%	134 / 2,035	10%	1,171 / 11,556
Clinical Nursing	6%	127 / 2,035	1%	62 / 11,556
Data Management	6%	127 / 2,035	5%	526 / 11,556
SQL (Programming Language)	6%	125 / 2,035	4%	453 / 11,556
Chemistry	6%	116 / 2,035	4%	411 / 11,556
Basic Life Support	6%	116 / 2,035	7%	799 / 11,556
Microsoft Access	6%	114 / 2,035	10%	1,109 / 11,556
Computer Science	5%	109 / 2,035	1%	95 / 11,556
Asepsis	5%	103 / 2,035	1%	66 / 11,556
Economics	5%	94 / 2,035	3%	349 / 11,556
Emergency Departments	5%	93 / 2,035	4%	491 / 11,556
Corrective And Preventive Action (CAPA)	4%	91 / 2,035	2%	243 / 11,556
Electronic Medical Record	4%	89 / 2,035	13%	1,528 / 11,556

JCAHO Standards	4%	88 / 2,035	4%	412 / 11,556
Surveys	4%	88 / 2,035	5%	624 / 11,556
Medicaid	4%	86 / 2,035	6%	641 / 11,556
Cardiopulmonary Resuscitation (CPR)	4%	85 / 2,035	10%	1,164 / 11,556
Risk Analysis	4%	82 / 2,035	2%	252 / 11,556
Clinical Research	4%	81 / 2,035	36%	4,114 / 11,556
Tuberculosis	4%	78 / 2,035	0%	39 / 11,556
R (Programming Language)	4%	73 / 2,035	4%	441 / 11,556
Medicare	4%	73 / 2,035	6%	719 / 11,556
SPSS (Statistical Software)	3%	70 / 2,035	9%	987 / 11,556
Quality Control	3%	70 / 2,035	4%	516 / 11,556
Clinical Laboratory Science	3%	66 / 2,035	0%	0 / 11,556
Environmental Health	3%	64 / 2,035	3%	294 / 11,556

Top Common Skills



Top Common Skills

	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Management	38%	780 / 2,035	47%	5,468 / 11,556
Communications	38%	766 / 2,035	29%	3,392 / 11,556
Leadership	34%	695 / 2,035	34%	3,879 / 11,556
Research	34%	687 / 2,035	48%	5,567 / 11,556
Presentations	23%	477 / 2,035	18%	2,067 / 11,556
Coordinating	20%	411 / 2,035	15%	1,683 / 11,556
Operations	18%	366 / 2,035	23%	2,680 / 11,556
Data Analysis	18%	359 / 2,035	20%	2,337 / 11,556
Written Communication	16%	323 / 2,035	1%	162 / 11,556
Microsoft Excel	16%	317 / 2,035	32%	3,702 / 11,556
Computer Literacy	15%	315 / 2,035	3%	353 / 11,556
Investigation	15%	297 / 2,035	5%	594 / 11,556
Microsoft Office	13%	270 / 2,035	31%	3,565 / 11,556

Microsoft PowerPoint	13%	267 / 2,035	26%	2,999 / 11,556
Interpersonal Communications	12%	251 / 2,035	3%	359 / 11,556
Problem Solving	11%	230 / 2,035	9%	995 / 11,556
Customer Service	11%	229 / 2,035	33%	3,835 / 11,556
Writing	11%	223 / 2,035	13%	1,527 / 11,556
Detail Oriented	11%	223 / 2,035	4%	473 / 11,556
Decision Making	9%	178 / 2,035	4%	478 / 11,556
Teaching	8%	159 / 2,035	21%	2,395 / 11,556
Organizational Skills	8%	157 / 2,035	1%	92 / 11,556
Innovation	8%	155 / 2,035	4%	478 / 11,556
Critical Thinking	7%	148 / 2,035	3%	357 / 11,556
Mathematics	7%	141 / 2,035	3%	380 / 11,556
Teamwork	7%	138 / 2,035	6%	649 / 11,556
Verbal Communication Skills	6%	127 / 2,035	1%	88 / 11,556
Sanitation	6%	126 / 2,035	1%	173 / 11,556
Time Management	6%	117 / 2,035	8%	956 / 11,556
Spreadsheets	6%	115 / 2,035	4%	437 / 11,556
Valid Driver's License	5%	106 / 2,035	0%	10 / 11,556
Microsoft Word	5%	105 / 2,035	24%	2,811 / 11,556
Scheduling	5%	100 / 2,035	8%	966 / 11,556
Word Processor	5%	96 / 2,035	2%	182 / 11,556
Physics	5%	95 / 2,035	1%	132 / 11,556
Advocacy	4%	91 / 2,035	5%	573 / 11,556
Consulting	4%	84 / 2,035	15%	1,688 / 11,556
Prioritization	4%	84 / 2,035	0%	57 / 11,556
Professionalism	4%	82 / 2,035	1%	172 / 11,556
Oral Communication	4%	79 / 2,035	1%	77 / 11,556
Program Management	4%	74 / 2,035	10%	1,170 / 11,556
Data Entry	3%	71 / 2,035	10%	1,171 / 11,556

Microsoft Outlook	3%	70 / 2,035	11%	1,225 / 11,556
Troubleshooting (Problem Solving)	3%	70 / 2,035	4%	511 / 11,556
Construction	3%	69 / 2,035	4%	468 / 11,556
Business Administration	3%	69 / 2,035	7%	806 / 11,556
Collaboration	3%	65 / 2,035	0%	15 / 11,556
Integration	3%	61 / 2,035	5%	570 / 11,556
Mentorship	3%	57 / 2,035	11%	1,222 / 11,556
Sales	3%	55 / 2,035	23%	2,696 / 11,556

Top Qualifications

	Postings with Qualification
(American Society For Quality) ASQ Certified	2
Advanced Life Support	4
Advanced Practice Registered Nurse	2
American Institute Of Certified Planners (AICP) Certification	2
American Medical Technologists	14
ANCC Certified	19
Associates Degree In Nursing	34
Bachelor of Science in Nursing (BSN)	228
CDL Class C License	3
Certified Case Manager	6
Certified Compensation Professional	5
Certified First Responder	2
Certified Health Data Analyst	6
Certified Health Education Specialist	2
Certified Health Physicist	2
Certified Medical Assistant	7
Certified Nursing Assistant	5
Certified Professional In Healthcare Information And Management Systems	4
Certified Professional In Healthcare Quality	10
Certified Professional In Healthcare Risk Management	2
Certified Safety Professional	2
Certified Tumor Registrar	16
CNOR Certification	3
Doctor Of Medicine (MD)	9
Doctor Of Pharmacy (PharmD)	15
Emergency Nurse Pediatric Course (ENPC)	2
HAZWOPER Certification	2
Infection Control Certification	453

Licensed Clinical Social Worker (LCSW)	2
Licensed Master Social Worker	2
Licensed Practical Nurse	29
Licensed Professional Counselor (LPC)	2
Licensed Professional Engineer	3
Licensed Social Worker	2
Master Of Business Administration (MBA)	23
Medical Technologist	214
Microsoft Certified Database Administrator	2
Nurse Practitioner	18
Patient Care Technician	30
Professional Engineer	11
Project Management Professional Certification	5
Registered Dietitian (RD/RDN)	8
Registered Health Information Technician	5
Registered Practical Nurse	6
Registered Respiratory Therapist	17
Senior Professional In Human Resources	9
SHRM-CP (Society for Human Resource Management Certified Professional)	8
SHRM-SCP (Society for Human Resource Management Senior Certified Professional)	5
Six Sigma Green Belt Certification	2
Trauma Nurse Core Course (TNCC)	6

Appendix A

Top Posting Sources

Website	Postings on Website (Jan 2017 - Mar 2020)
Nexxt.com	590
Beyond.com	271
Monster.com	221
Employmentcrossing.com	204
Glassdoor.com	198
My.jobs	187
Dejobs.org	182
Geebo.com	182
Jobs.net	146
Careerbuilder.com	136
Illinois.gov	120
Jobing.com	120
Learn4good.com	116
Resume-library.com	105
Americasjobexchange.com	101
Careerarc.com	101
Disabledperson.com	101
Jofdav.com	78
Thejobnetwork.com	72
Bluecollarcrossing.com	71
Jobserve.com	65
Governmentjobs.com	64
Careerboard.com	61
Localjobnetwork.com	61
Neuvoo.com	56

Appendix B

Sample Postings

Infection Preventionist - Infection Prev & Control-Full time, Days

Link to Live Job Posting: click.appcast.io

Location: Summit, IL

O*NET: 29-1141.00

Company: Northwest Community Healthcare Corp

Job Title: Staff Nurses

Infection Preventionist - Infection Prev & Control-Full time,

Days Northwest Community Healthcare Summit Argo, IL Shift:

Full time, Days Reporting to the Accreditation Officer, contributes to the provision of high quality patient care by promoting and implementing infection prevention and control practices and compliance with regulatory agency requirements. Provides expert knowledge in infection control principles and practice. 1. Designs and implements the organization's infection control surveillance program in collaboration with the Infection Control Committee; communicates findings to physicians, staff, and appropriate committees; implements appropriate action when necessary. 2. Serves as a resource to the organization in infection control principles, guidelines and regulatory standards; designs and implements orientation and ongoing education programs on infection control issues for hospital staff. 3. Ensures the organization meets regulatory and accrediting body infection prevention and control standards including The Joint Commission, AAAHC, IDPH, CMS, and OSHA. 4. Assists the organization in incorporating infection control principles into their policies and procedures. Collaborates with all disciplines and departments to develop and update area-specific policies and procedures pertinent to infection control principles. 5. Collaborates with the Infectious Disease Physicians to investigate infectious outbreaks; implements action plans as necessary. 6. Collaborates with the Illinois Public Health Department in the required reporting of infections and with Employee and Occupational Health Services to follow up on infections in hospital personnel. 7. Collaborates with Employee and Occupational Health Services to investigate staff exposure to communicable diseases. Contacts appropriate individuals so that timely actions can be initiated to limit the spread of infection. 8. Reviews laboratory information as appropriate to identify potential infections. Abstracts clinical information from respective data sources, analyzes data and reports to various audiences. 9. Inspects the environment including sterilization, sanitation and disinfection practices and observes personnel activities to detect infection hazards and evaluate compliance with Infection Control Committee standards; implements appropriate action when necessary. 10. Assists team members in identifying Infection Prevention and Control goals and develop a strategy to achieve. 11. Evaluates the quality of infection control activities on a regular basis; recommends changes as appropriate. 12. Responds to exposure inquiries, crises and emergencies as appropriate and in a timely manner to provide infection control exposure support when needed, 24/7. 13. Assures Infection Prevention and Control input into the evaluation of new products being considered by the organization. 14. Adheres to all Northwest Community Hospital standards, policies, and procedures. 1. The level of knowledge normally obtained through the completion of a Bachelor's Degree in Nursing, Epidemiology or a related field such as Medical Technology. Master's Degree preferred. 2. Experience in infection prevention and control preferred. 3. Association for Practitioners in Infection Control (APIC) training course or equivalent desired. Certification in Infection Control (CIC) is preferred and required within three years of hire. 4. Computer skills, process improvement methodology and basic statistical control knowledge required. 5. Knowledge of adult education principles required; knowledge of patient care practice strongly preferred. 6. The leadership skills required to provide guidance and direction to others. 7. The analytical skills necessary to collect and analyze surveillance data, and to identify epidemiological variations in levels of disease and to develop prevention and control measures. 8. The written and verbal skills necessary to communicate in a clear, concise, and persuasive manner to all levels of the organization. 9. The ability to use a personal computer for the storage, manipulation and retrieval of data.

PHYSICAL REQUIREMENTS

Requires light physical effort. May require frequent periods of standing or walking. May require frequent lifting or moving of light weight material, occasional lifting or moving heavy weight material, or rarely lifting or moving of heavy weight material. 2. Flow of work and character of duties involves part normal and part concentrated attention along with manual coordination.

WORKING CONDITIONS

1. Conditions are acceptable. Several disagreeable elements or hazards are occasionally present, i.e.: possibility of exposure to infectious diseases, biophysical hazards and high-pressure medical gases.

Part-Time Instructor, Health Science Education and Research

Link to Live Job Posting: www.diversity.com

Location: Lexington, KY

O*NET: 25-1071.00

Company: Uk Healthcare

Job Title: Health Science Instructors

Part-Time Instructor, Health Science Education and Research Employer Name:

UK HealthCare Description The College of Health Sciences (CHS) invites applications for Part-Time Instructors in the Department of Clinical Sciences (). Part-Time Instructors could serve as instructors of record in both the Human Health Sciences and the Clinical Leadership and Management undergraduate degree programs and may be asked to teach courses such as Health & Medical Delivery Systems, Health Policy & Politics, Social & Cultural Evolution of Disease, Leadership & HR Management, Health Services Administration, Healthcare Finance, and/or Research in Human Health Sciences. Applicants must possess an earned masters or doctoral degree. Part-Time Instructors are paid per course they instruct. Candidates should apply on line with a curriculum vita and letter of interest. Questions should be directed to the department interim chair Karen Badger, Ph.D. by email at , the CLM director Sarah Kerksmar, PhD. by email at or the HHS director Jami Warren, Ph.D. by email at . The mailing address is Department of Clinical Sciences, University of Kentucky, Wethington Building Room 207A, 900 South Limestone Street, Lexington, KY 40536-0200. This is not in lieu of submitting an application for consideration. Review of applications will begin immediately and continue until course needs are filled. Upon offer of employment, successful applicants must undergo a national background check and pre-employment drug screen as required by University of Kentucky Human Resources. The Human Health Sciences (HHS) degree is one of two academic undergraduate degrees in the unit and is designed to provide the needed prerequisites for pursuit of advanced degrees in dentistry, pharmacy, physician assistant studies, physical therapy, and other health professions through identified tracks. Students with this bachelor's degree in HHS will also be prepared for careers in patient navigation, health management and leadership as well as graduate studies. The Clinical Leadership and Management (CLM) undergraduate degree and Certificate option provides training and experience specifically in the area of health services management, health law, health policy, and ethics. Students with a bachelor's degree in CLM will be prepared to enter careers in healthcare administration.

Associated topics:

addict, cancer, diagnostic, dietary, epidemiology, genetic, human disease, occupational therapy, otolaryngology, psychiatry Comments [Scientific Research] How to Apply Apply Here Be Diverse - Join Diversity.com Tweet Candidate Registration

----- Name / Username

- Email
- Fields with (
-) are required!
- Send to a friend
- Your Name Your Email
- Friend's Name Friend's Email Subject Message
- Please complete all fields ----- Please type text shown in purple box.

+ Information +

Shown:

2 + Print Page + +

Date Posted:

Date Posted:

03-28-2020 + Job Location +

City:

Lexington +

State:

KENTUCKY, KY

, +

Career Level:

Professionals / Managers +

Industry:

[Scientific Research] Education +

Country:

US +

Term:

Full Time + Apply Here + Company Profile + Keywords + Part-Time Instructor, Health Science Education and Research

Research Specialists – The Centers Inc in Atlanta, GA (Mar 2020 - Active)

Intelligence Research Specialist

Link to Live Job Posting: www.usajobs.gov

Location: Atlanta, GA

O*NET: 33-3021.06

Company: The Centers Inc

Job Title: Research Specialists

Intelligence Research Specialist Employer Name:

Centers for Disease Control and Prevention Description Summary The incumbent works under the guidance of a professional expert on matters pertaining to intelligence, counterintelligence, and/or global security threats which impact the nation's public health or public health infrastructure and is responsible for the analysis, evaluation, interpretation, and dissemination of such information. Must be able to obtain and maintain a Top Secret/ Special Sensitive security clearance. Responsibilities As a Intelligence Research Specialist, you will: Research and analyze all- source intelligence data. Develop and evaluate national intelligence information to analyze impact to national public health programs and/or the public health infrastructure. Prepare and provide, and briefs threat assessments to subject matter experts. Advise on problems, issues and policy concerning national efforts to enhance public health capabilities to respond to terrorism attacks. Requirements Conditions of Employment US Citizenship is required. Background Investigation is required.

E-Verify:

If you are selected for this position, the documentation that you present for purposes of completing the Department of Homeland Security (DHS) Form I-9 will be verified through the DHS "E-Verify" System. Federal law requires DHS to use the E-Verify System to verify employment eligibility of all new hires, and as a condition of continued employment obligates the new hire to take affirmative steps to resolve any discrepancies identified by the system. The U.S. Department of Health and Human Services is an E-Verify Participant.

Direct Deposit:

All Federal employees are required to have Federal salary payments made by direct deposit to a financial institution of their choosing. All qualification requirements must be met by the closing date of the announcement. One-year probationary period may be required. Travel, transportation, and moving expenses will be paid:

No Bargaining Unit Position:

No Drug Screening Required:

Yes Recruitment Incentive may be authorized: No Annual Leave for non-federal service may be authorized: No Research position: No Promotion potential:

Yes:

This position has promotion potential to GS-12 Promotion to the next grade level is at management's discretion and is based on your meeting qualifications and time-in-grade requirements, demonstrated ability to perform the higher level duties, the continuing need for the higher level duties, and administrative approval. Promotion to the next grade level is not guaranteed and no promise of promotion is implied.

Supervisory position:

No May be required to travel domestically Must be able to obtain and maintain a Top Secret/Special Sensitive - Special Access Clearance TS/SCI. May be required to work rotating shifts.

Qualifications Minimum Qualifications:

Applicants must have at least one year of specialized experience at or equivalent to the GS-07 in the Federal service as defined in the next paragraph. Specialized experience is experience which is directly related to the position which has equipped the applicant with the particular knowledge, skills and abilities (KSAs) to successfully perform the duties of the position to include experience in researching and analyzing classified intelligence or sensitive information and open sources for activities that could adversely affect the nation's public health or public health infrastructure and global health initiatives. OR Have a master's degree or equivalent graduate degree or two full years of progressively higher level graduate education leading to such a degree or LL.B. or J.D., from an accredited college or university. Such education must demonstrate the knowledge, skills, and abilities necessary to do the work. One year of full-time graduate education is considered to be the number of credit hours that the school attended has determined to represent one year of full-time study. If that information cannot be obtained from the school, 18 semester hours will satisfy the one year of full-time study requirement. OR Have a combination of graduate level education and experience that meets 100% of the qualification requirements for this position. Education completed in colleges or universities outside the United States may be used to meet the education requirements. You must provide acceptable documentation that the foreign education is comparable to that received in an accredited educational institution in the United States. For more information on how foreign education is evaluated, visit: Additional Information PHS Commissioned Corps Officers interested in performing the duties of this position within the Commissioned Corps (not as a career/career-conditional employee) are encouraged to apply under the merit promotion announcement (if applicable). Additional selections may be made within the same geographical location CDC-wide. The utilization of shared certificates within multiple Centers of the Center of Disease Control and Prevention may be used from this vacancy announcement for specialties to include but not limited to: Applied Epidemiology, Behavioral Epidemiology, Chronic Diseases, Emergency Preparedness and Response, Emerging Infectious Diseases, Environmental Health, HIV/AIDS, Immunization, Infectious Diseases (e.g. Viral, Parasitic, etc.), Influenza, Malaria, Non-communicable Diseases, Outbreak Investigations, Sexually Transmitted Diseases (STDs), Surveillance, Tropical Medicine, Tuberculosis (TB), Viral Hepatitis, and/or Zoonotic Diseases. If you are a veteran with preference eligibility and you are claiming 5-points veterans' preference, you must submit a copy of your DD-214 or other proof of eligibility. If you are claiming 10-point veterans' preference, you must also submit an SF-15, "Application for 10-Point Veterans' Preference" plus the proof required by that form. For more information on veterans' preference see Males born after December 31, 1959 must be registered or exempt from Selective Service (see For information on "People with Disabilities" please see and Interagency Career Transition Assistance Program (ICTAP): For information on how to apply as an ICTAP eligible see guides/careertransition.asp#ictap. To be well-qualified and exercise selection priority for this vacancy, displaced Federal employees must be rated at 85.0 or above on the rating criteria for this position. To view the questionnaire, click on the following link: If you are unable to apply online or need to fax a document(s), view the following link for information regarding an Alternate Application.

Associated topics:

antibody, aseptic, biopharma, food, healthcare, microbiological, nutrition, physiologist, toxicologist, trauma Comments [Scientific Research] How to Apply Apply Here Be Diverse - Join Diversity.com Tweet Candidate Registration _____

Name / Username

- Email
- Fields with (
-) are required!
- Send to a friend
- Your Name Your Email
- Friend's Name Friend's Email Subject Message
- Please complete all fields _____ Please type text shown in purple box.

+ Information +

Shown:

2 + Print Page + +

Date Posted:

03-28-2020 + Job Location +

City:

Atlanta +

State:

GEORGIA, GA

, +

Career Level:

Professionals / Managers +

Industry:

[Scientific Research] Health/Medicine/Pharmacology +

Country:

US +

Term:

Full Time + Apply Here + Company Profile + Keywords + Intelligence Research Specialist

Staff Engineers – Peoria Disposal in Peoria, IL (Mar 2020 - Active)

Staff Engineer

Link to Live Job Posting: www.resume-library.com

Location: Peoria, IL

O*NET: 17-2081.00

Company: Peoria Disposal

Job Title: Staff Engineers

Staff Engineer Today by

PEORIA DISPOSAL COMPANY

| Be the first to apply Peoria, Illinois Apply now Staff Engineer Peoria Disposal Company Peoria, IL 14 hours ago 51 applicants Smiling faces of LinkedIn members See who Peoria Disposal Company has hired for this role Apply Now Posted by: Angela Hutton Angela Hutton Angela Hutton Human Resources Generalist at Coulter Companies/ PDCAREA PDC Technical Services, Inc. (PDC Tech) is seeking a Staff Engineer to participate in projects primarily related to designing, permitting, constructing, and providing operations support for waste management facilities, including landfills, transfer stations, recycling facilities, and trucking terminals. Duties will include performing field data collection, engineering analyses, preparing written engineering documents, and preparing design and construction drawings. A Bachelor of Science degree and/or relevant work experience is preferred. The position is based in Peoria, Illinois.

Minimum skills and competencies include:

Well-rounded understanding of basic civil and geotechnical engineering concepts Strong attention to detail Effective oral and written communication skills Ability to prioritize assignment activities to meet deadlines Proficiency with Microsoft Office and, in particular, the ability to design and maintain Microsoft Excel spreadsheets to perform a broad range of related engineering computations Basic CAD skills using AutoCad Additional skills and experience will be considered strong assets, including: Experience at developing digital terrain models in AutoDesk Civil 3D Storm water modeling to compute watershed run-off quantities, peak discharge, run-off velocities, and tractive force Modeling of pressure pipe networks for both compressible (e.g. landfill gas) and incompressible (e.g. water/leachate) fluids Calculating air emissions from a variety of industrial sources Slope stability modeling and other geotechnical computations Designing and detailing structural components of limited complexity, such as concrete slab-on grade, box culverts, headwalls, retaining wall, etc. Field surveying Construction quality assurance observations and testing Construction quantity take-offs This position requires a commitment to safety, occasional overnight travel, ability to occasionally work outdoors in a wide range of weather and terrain conditions, and a valid driver's license. The candidate will be required to pass a background check and a pre-employment physical including a drug screen. PDC Tech provides environmental engineering consulting services to private and public sector clients, with a special emphasis on landfill design and monitoring. We are a subsidiary of the privately held, 600-person strong Coulter Companies, Inc. Founded in 1928, Coulter Companies provides a wide range of environmental services throughout the Midwest through its subsidiaries, which include Peoria Disposal Company, Area Landfill, Inc., Area Disposal Service, Area Recycling, Inc., and PDC Laboratories. We do not sponsor foreign nationals for immigration purposes. Applications should not be submitted if an immigration sponsorship will be required either now or in the future. Only United States Permanent Residents or Citizens will be considered. PDC Tech participates in the e-Verify program. No telephone calls please. We offer an excellent benefit package. If you are interested in this position, please apply here, on our website •or submit a cover letter and resume to •.

Subject Line:

Staff Engineer PDC Technical Services, Inc. is an Equal Opportunity Employer. EOE-M/F/Disabled/Vet Seniority level Entry level Employment type Full-time Job function Consulting Engineering Science Industries Environmental Services Search for more jobs like this Apply now Job ref: 8fdd0a4c3f793de Job type:

Permanent Job ID:

25948177 Apply for Staff Engineer By registering with Resume-Library you agree to our Privacy Policy and Terms & Conditions Save Email Print Share Share job on social media: Share Tweet Share Share Back to search

Infection Control Practitioner

Link to Live Job Posting: Posting is no longer active

Location: [Unknown city]

O*NET: 29-1141.00

Company: West Park Hospital District

Job Title: Employee Health Nurses

Register Job Search Login FAQs Register Employer FAQs Login Apply for Jobs Apply for Jobs Post a Job Post a Job Local Jobs Home Register Here to Apply for Jobs or Post Jobs. X Infection Control Practitioner Job in IL Illinois -

USA Apply Here Company:

West Park Hospital WY US Full Time position Listed on 2020-03-28 Job specializations:

- Healthcare Healthcare Management, Medical Specialist, Health & Safety, Infectious Disease
- Nursing Job Description & How to

Apply Below Location:

Illinois Medical District, IL Located on Chicago's West and Southwest Side, Sinai Health System is comprised of Mount Sinai Hospital, Holy Cross Hospital, Schwab Rehabilitation Hospital, Sinai Children's Hospital, Sinai Community Institute, Sinai Medical Group, and Sinai Urban Health Institute. The entities of Sinai Health System collectively deliver a full range of quality inpatient and outpatient services, as well as a large number of innovative, community-based health, research and social service programs. We focus our collective depth of expertise and passion to improve the health of the 1.5 million people who live in our diverse service area. With our team of dedicated caregivers, Sinai Health System is committed to building stronger, healthier communities. A partner with the Jewish United Fund in serving our community Infection Control Practitioner Infection Control Practitioner, under the clinical direction of the Chair of the Infection Control Committee is responsible for planning, directing, implementing and evaluating the Hospital-Wide Infection control program. Performs administrative duties required for effective program operations.

Essential Functions and Duties:

- Identifies patients who are infected and/or colonized with organisms capable of producing nosocomial infections.
- Review infected/colonized patients who need to be recultured and possibly removed from contact precautions.
- Resource person regarding monitoring and referral of employee illnesses to ensure follow-up care of exposure situations, infectious and/or communicable diseases.
- Conducts environmental rounds in patient care units, clinical and ancillary support services and the general facility to assess availability of supplies, clinical practices, handling practices, sanitation and maintenance, and engineering controls. Prevention Activities
- Develops and maintains policies and procedures to direct the activities for infection prevention, identification and control.
- Recommends changes in hospital procedures that relate to infection control, accepted practice guidelines and applicable laws and regulations.
- Reviews laboratory culture reports and monitors appropriate infection precautions and equipment are in place.
- Identifies trends in antibiotic resistant organisms and reports information at appropriate committee meetings.
- In the event of a threat of an outbreak of infection, under direction of the Chair of the Infection Control Committee, institutes appropriate control measures.
- Participates in the implementation of the Exposure Control Plan
- Reviews Department Managers' infection control specific policies/procedures for sound epidemiological principals prior to submission to the Infection Control committee for approval.

- Functions as a clinical resource to implement activities proven effective in reducing infections.
- Serves on committees, as appropriate, which are involved in selection, evaluation, and design which impact the infection control function and support of programs, Infection Control Committee, Performance Improvement, and Product Improvement Committee.
- Consults with outpatient service areas so they can report infectious diseases to the Chicago Department of Public Health.
- Participates in the hospital-wide orientation and mandatory in-services.
- Collaborates with Educational Coordinators and department managers to provide specific in-service education.
- Provides materials and resources for patient/family education.
- Collects required data and completes reports on infectious diseases for the Chicago Department of Public Health, State and Federal regulatory agencies and submits reports in a timely manner.
- Collects, tabulates analyzes and reports results of surveillance activities.
- Reports monthly nosocomial infections to Infection Control Committee. Skills & Qualifications
- BS required (Master's degree preferred - M.P.H. with a focus on Epidemiology and Biostatistics, or M.S.N. with a focus on Infection Control and Environmental Safety)
- 5 or more years of clinical experience and 2 years of experience in Infection Control w/BSN degree
- 5 or more years of clinical experience w/M.P.H or M.S.N. degree

Required Licenses/Certifications:

CIC within two years of start of employment Position Requirements 1 to 2 Years work experience Go to Application Site Search for further

Jobs Here:

× [

INS:

:

INS]

LANGUAGE ES DE

Terms & Privacy Policy Refund Policy Site Map Contact us © 2020 Learn4Good Job Posting Web Site - listing US Job Opportunities, Staffing Agencies, International / Overseas Employment. Find & apply for expat jobs/ English teaching jobs abroad for Americans, Canadians, EU/British citizens, recent college graduates...

Appendix C - Data Sources and Calculations

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Industrial Relations; Florida Department of Economic Opportunity; Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit; Illinois Department of Employment Security, Employment Projections; Indiana Department of Workforce Development; Kentucky Office of Employment and Training; Ohio Department of Job and Family Services, Labor Market Information Division; Tennessee Department of Labor and Workforce Development, Research and Statistics Division

Job Posting Analytics

Emsi Q2 2020 Data Set

April 2020

Kentucky

Parameters

Regions

Code	Description
1	Alabama
12	Florida
13	Georgia
17	Illinois

Code	Description
18	Indiana
21	Kentucky
39	Ohio
47	Tennessee

Skills & Qualifications

Results should include any of the selected skills

Code	Skills & Qualifications
Hard Skill	Epidemiology
Hard Skill	Epidemiological Method
Hard Skill	Genetic Epidemiology
Hard Skill	Clinical Surveillance
Hard Skill	Public Surveillance
Hard Skill	Disease Surveillance
Hard Skill	Surveying
Hard Skill	National Electronic Disease Surveillance Systems

Code	Skills & Qualifications
Hard Skill	Behavioral Risk Factor Surveillance Systems
Hard Skill	Field Surveys
Hard Skill	Survey Data Collection
Hard Skill	Online Surveys (Evaluation Methods)
Hard Skill	Public Survey
Hard Skill	Survey Sampling
Hard Skill	Statistical Survey

Industry Sector (2-Digit)

Results should include

Code	Industry Sector (2-Digit)
62	Health Care and Social Assistance

Minimum Experience Required

Any

Education Level

Any

Keyword Search

Timeframe

Jan 2017 - Mar 2020

Posting Lifespan

Any Duration

Job Postings Summary

<p>4,108 Unique Postings 16,000 Total Postings</p>	<p>4 : 1 Posting Intensity Regional Average: 4 : 1</p>	<p>35 days Median Posting Duration Regional Average: 31 days</p>
--	--	--

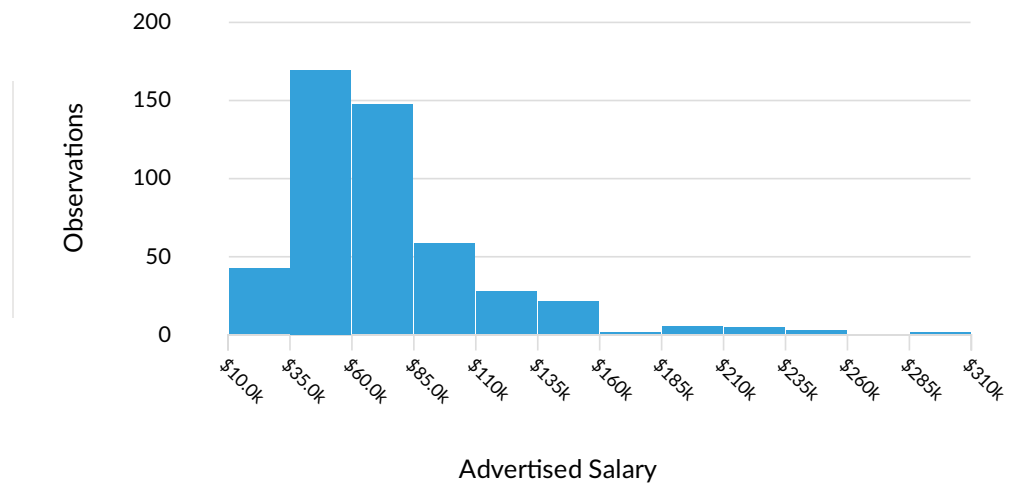
There were 16,000 total job postings for your selection from January 2017 to March 2020, of which 4,108 were unique. These numbers give us a Posting Intensity of 4-to-1, meaning that for every 4 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that they are putting average effort toward hiring for this position.

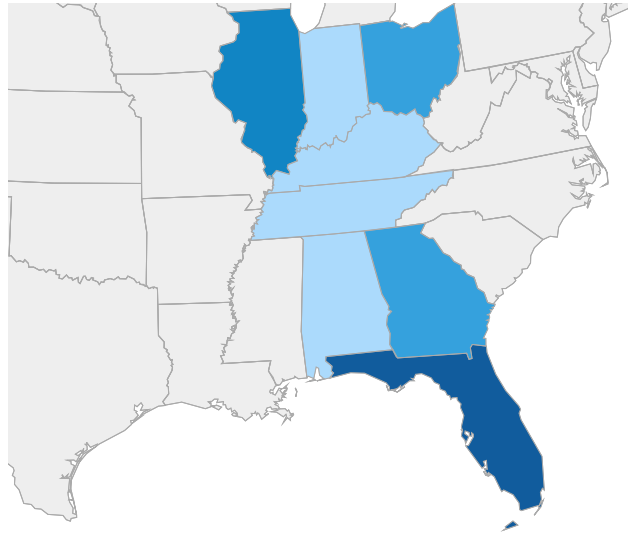
Advertised Salary

There are 477 advertised salary observations (12% of the 4,108 matching postings).

\$64.1K
Median Advertised Salary

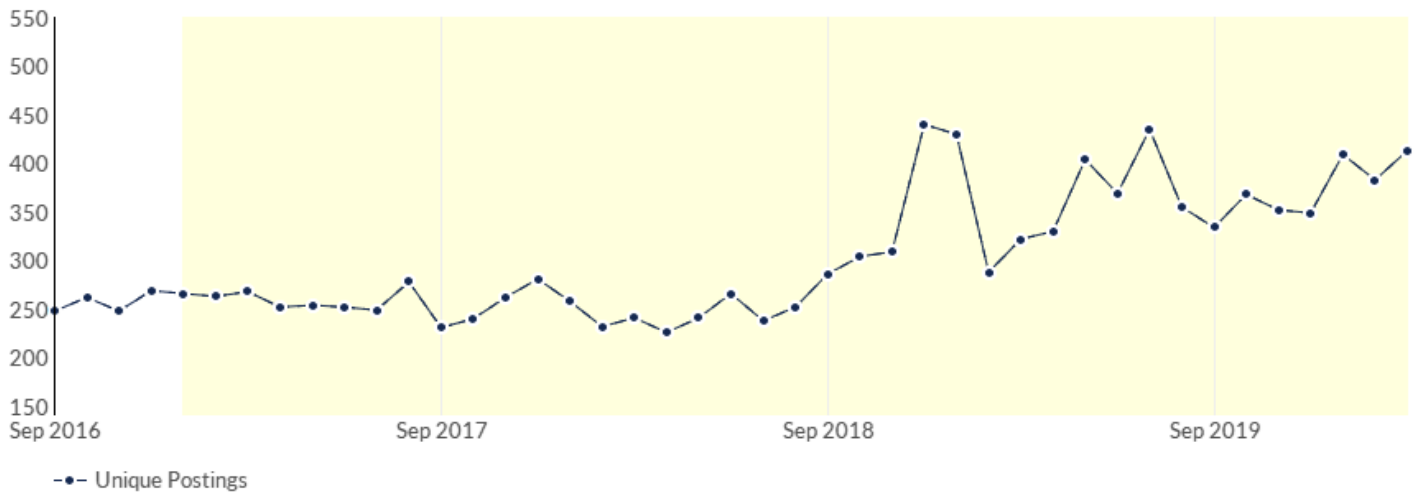


Job Postings Regional Breakdown



State	Unique Postings (Jan 2017 - Mar 2020)
Florida	1,155
Illinois	882
Ohio	684
Georgia	586
Tennessee	289

Unique Postings Trend



Month	Unique Postings	Posting Intensity
Sep 2016	248	3 : 1
Oct 2016	262	4 : 1
Nov 2016	248	5 : 1
Dec 2016	269	5 : 1
Jan 2017	266	5 : 1
Feb 2017	263	5 : 1
Mar 2017	268	5 : 1
Apr 2017	252	6 : 1
May 2017	254	6 : 1
Jun 2017	252	6 : 1
Jul 2017	249	6 : 1
Aug 2017	278	5 : 1
Sep 2017	231	6 : 1
Oct 2017	240	6 : 1
Nov 2017	262	6 : 1
Dec 2017	281	5 : 1
Jan 2018	258	5 : 1
Feb 2018	232	5 : 1
Mar 2018	241	5 : 1
Apr 2018	226	4 : 1

May 2018	241	5 : 1
Jun 2018	266	5 : 1
Jul 2018	238	5 : 1
Aug 2018	252	5 : 1
Sep 2018	286	5 : 1
Oct 2018	304	5 : 1
Nov 2018	309	4 : 1
Dec 2018	440	4 : 1
Jan 2019	430	4 : 1
Feb 2019	288	5 : 1
Mar 2019	322	5 : 1
Apr 2019	330	5 : 1
May 2019	404	5 : 1
Jun 2019	369	5 : 1
Jul 2019	435	5 : 1
Aug 2019	355	6 : 1
Sep 2019	334	6 : 1
Oct 2019	368	6 : 1
Nov 2019	352	6 : 1
Dec 2019	349	7 : 1
Jan 2020	409	7 : 1
Feb 2020	383	7 : 1
Mar 2020	413	7 : 1

Education & Experience Breakdown

Education Level	Unique Postings	% of Total
Unspecified	908	22%
High school or GED	392	10%
Associate's degree	678	17%
Bachelor's degree	2,035	50%
Master's degree	1,316	32%
Ph.D. or professional degree	580	14%

Minimum Experience	Unique Postings	% of Total
No experience listed	1,219	30%
0 - 1 Years	935	23%
2 - 3 Years	1,301	32%
4 - 6 Years	562	14%
7 - 9 Years	50	1%
10+ Years	41	1%

Top Companies Posting

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Nationwide Children's Hospital	541 / 223	2 : 1 	30 days
Rush University	485 / 152	3 : 1 	44 days
Moffitt Cancer Center	321 / 141	2 : 1 	40 days
HCA Holdings, Inc.	883 / 136	6 : 1 	48 days
The Centers Inc	803 / 93	9 : 1 	28 days
Evolent Health, Inc.	271 / 75	4 : 1 	56 days
Kindred Healthcare, Inc.	425 / 56	8 : 1 	49 days
Adventist Health System	332 / 56	6 : 1 	40 days
ATI Physical Therapy	180 / 53	3 : 1 	57 days
The Cleveland Clinic Foundation	168 / 51	3 : 1 	17 days
Unitypoint Health	150 / 49	3 : 1 	38 days
Southeast Georgia Health Systems, Inc.	306 / 42	7 : 1 	42 days
Kaiser Permanente	217 / 40	5 : 1 	69 days
Holdings, LLC	38 / 38	1 : 1 	7 days
Orlando Health, Inc.	251 / 36	7 : 1 	53 days
Broward Health	91 / 36	3 : 1 	43 days
Northside Hospital, Inc.	254 / 36	7 : 1 	47 days
Mayo Clinic	207 / 35	6 : 1 	51 days
Baptist Health	76 / 34	2 : 1 	24 days
Ohiohealth Corporation	136 / 34	4 : 1 	44 days
The Health & Hospital Corp of Marion County	103 / 34	3 : 1 	33 days
Osf Healthcare	75 / 34	2 : 1 	33 days
Infoware Technology Systems, Inc.	34 / 32	1 : 1 	13 days
Wellstar Health System, Inc.	149 / 32	5 : 1 	39 days
Sinai Health System	96 / 32	3 : 1 	24 days
University Hospitals of Cleveland	114 / 32	4 : 1 	44 days
HealthSouth Corporation	155 / 31	5 : 1 	53 days
Advocate Health and Hospitals Corporation	81 / 31	3 : 1 	35 days

Northwestern Memorial Hospital	108 / 30	4 : 1		33 days
Lees Health LLC	126 / 28	5 : 1		41 days
Siu School of Medicine	36 / 26	1 : 1		28 days
Ohio Department of Health	83 / 25	3 : 1		16 days
Tenet Healthcare Corporation	118 / 25	5 : 1		65 days
Ascension Health	149 / 24	6 : 1		33 days
Continuum Medical Group, Inc.	26 / 23	1 : 1		7 days
Centegra Health System	45 / 22	2 : 1		39 days
Spring Hills Senior Community	61 / 21	3 : 1		43 days
Catholic Health Initiatives	111 / 21	5 : 1		54 days
Encompass Health Partners, LLC	145 / 21	7 : 1		35 days
The Medicus Firm LLC	21 / 21	1 : 1		28 days
Children's Healthcare of Atlanta, Inc.	122 / 20	6 : 1		29 days
Amita Home Health Inc	192 / 20	10 : 1		23 days
Eskenazi Health Center, Inc.	62 / 20	3 : 1		42 days
Ethica Health & Retirement Communities	45 / 20	2 : 1		52 days
Community Health Systems, Inc.	105 / 20	5 : 1		43 days
Presence Health	106 / 20	5 : 1		37 days
Piedmont Hospital, Inc.	69 / 19	4 : 1		44 days
Mercy Health	62 / 19	3 : 1		44 days
Jackson Health System	64 / 19	3 : 1		11 days
Ohio E	63 / 18	4 : 1		14 days






Top Cities Posting

City	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Chicago, IL	1,572 / 459	3 : 1 	43 days
Columbus, OH	899 / 321	3 : 1 	30 days
Atlanta, GA	1,914 / 262	7 : 1 	47 days
Tampa, FL	529 / 186	3 : 1 	46 days
Indianapolis, IN	349 / 101	3 : 1 	35 days
Orlando, FL	733 / 93	8 : 1 	51 days
Miami, FL	439 / 84	5 : 1 	35 days
Jacksonville, FL	377 / 76	5 : 1 	33 days
Nashville, TN	499 / 76	7 : 1 	39 days
Cincinnati, OH	215 / 59	4 : 1 	39 days
Louisville, KY	301 / 57	5 : 1 	44 days
Fort Lauderdale, FL	152 / 55	3 : 1 	43 days
Cleveland, OH	207 / 52	4 : 1 	30 days
Memphis, TN	325 / 51	6 : 1 	51 days
Peoria, IL	126 / 49	3 : 1 	33 days
Birmingham, AL	237 / 40	6 : 1 	40 days
Gainesville, FL	119 / 39	3 : 1 	51 days
Saint Petersburg, FL	136 / 33	4 : 1 	78 days
Fort Myers, FL	134 / 31	4 : 1 	47 days
Springfield, IL	52 / 29	2 : 1 	35 days
Daytona Beach, FL	157 / 27	6 : 1 	58 days
West Palm Beach, FL	167 / 27	6 : 1 	66 days
Greensburg, IN	63 / 25	3 : 1 	36 days
Kissimmee, FL	192 / 21	9 : 1 	41 days
Tallahassee, FL	59 / 21	3 : 1 	29 days
Buckhead, GA	24 / 20	1 : 1 	29 days

Hollywood, FL	80 / 20	4 : 1		22 days
McHenry, IL	49 / 20	2 : 1		44 days
Akron, OH	113 / 19	6 : 1		15 days
Augusta, GA	109 / 18	6 : 1		34 days
Marietta, GA	70 / 18	4 : 1		37 days
Savannah, GA	61 / 18	3 : 1		15 days
Dayton, OH	48 / 17	3 : 1		24 days
Chattanooga, TN	62 / 16	4 : 1		23 days
Altamonte Springs, FL	47 / 15	3 : 1		40 days
Decatur, GA	45 / 15	3 : 1		44 days
Fort Wayne, IN	69 / 15	5 : 1		34 days
Knoxville, TN	41 / 15	3 : 1		30 days
Toledo, OH	44 / 15	3 : 1		34 days
Metamora, IL	49 / 14	4 : 1		35 days
Pompano Beach, FL	35 / 14	3 : 1		37 days
Athens, GA	38 / 13	3 : 1		33 days
Lexington, KY	52 / 13	4 : 1		38 days
Tuscaloosa, AL	33 / 13	3 : 1		23 days
Brentwood, TN	53 / 12	4 : 1		57 days
Panama City, FL	45 / 12	4 : 1		42 days
Brooksville, FL	108 / 11	10 : 1		41 days
Florence, KY	33 / 11	3 : 1		22 days
Lyndon, KY	18 / 11	2 : 1		38 days
Macon, GA	32 / 11	3 : 1		13 days



Top Posted Occupations

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Registered Nurses	5,808 / 1,258	5 : 1 	39 days
Postsecondary Teachers	473 / 205	2 : 1 	29 days
Epidemiologists	870 / 199	4 : 1 	36 days
Medical Scientists, Except Epidemiologists	736 / 196	4 : 1 	45 days
Medical and Health Services Managers	779 / 190	4 : 1 	45 days
Natural Sciences Managers	418 / 116	4 : 1 	33 days
Management Analysts	480 / 105	5 : 1 	45 days
Statisticians	364 / 91	4 : 1 	44 days
Social and Human Service Assistants	179 / 69	3 : 1 	29 days
Managers, All Other	184 / 61	3 : 1 	54 days
Computer Systems Analysts	236 / 55	4 : 1 	42 days
Occupational Health and Safety Specialists	180 / 51	4 : 1 	18 days
Medical Records and Health Information Technicians	177 / 50	4 : 1 	37 days
Civil Engineers	137 / 42	3 : 1 	33 days
Network and Computer Systems Administrators	43 / 40	1 : 1 	13 days
Market Research Analysts and Marketing Specialists	168 / 39	4 : 1 	58 days
Business Operations Specialists, All Other	146 / 38	4 : 1 	43 days
Environmental Scientists and Specialists, Including Health	265 / 38	7 : 1 	34 days
Medical Assistants	142 / 34	4 : 1 	36 days
Sales Representatives, Services, All Other	36 / 34	1 : 1 	7 days
Social and Community Service Managers	127 / 30	4 : 1 	29 days
Social Science Research Assistants	80 / 30	3 : 1 	26 days
Internists, General	41 / 28	1 : 1 	7 days
Recreation Workers	68 / 27	3 : 1 	43 days
Licensed Practical and Licensed Vocational Nurses	50 / 22	2 : 1 	35 days
Physicians and Surgeons, All Other	75 / 21	4 : 1 	59 days
Clinical Laboratory Technologists and Technicians	97 / 21	5 : 1 	52 days
Nursing Assistants	359 / 21	17 : 1 	24 days

First-Line Supervisors of Office and Administrative Support Workers	73 / 21	3 : 1		16 days
Computer Occupations, All Other	61 / 20	3 : 1		34 days
Health Educators	84 / 19	4 : 1		28 days
Operations Research Analysts	50 / 18	3 : 1		31 days
Computer and Information Systems Managers	48 / 17	3 : 1		34 days
Surveyors	44 / 17	3 : 1		17 days
Mental Health and Substance Abuse Social Workers	40 / 17	2 : 1		14 days
Human Resources Specialists	51 / 16	3 : 1		42 days
Economists	92 / 16	6 : 1		55 days
Family and General Practitioners	29 / 16	2 : 1		26 days
Medical Secretaries	40 / 16	3 : 1		21 days
Surveying and Mapping Technicians	42 / 15	3 : 1		23 days
Computer User Support Specialists	53 / 14	4 : 1		41 days
Nurse Practitioners	22 / 14	2 : 1		48 days
Human Resources Managers	37 / 13	3 : 1		40 days
Compliance Officers	32 / 12	3 : 1		12 days
Civil Engineering Technicians	49 / 12	4 : 1		16 days
Dietitians and Nutritionists	44 / 12	4 : 1		27 days
Healthcare Support Workers, All Other	28 / 12	2 : 1		27 days
Cooks, Institution and Cafeteria	99 / 12	8 : 1		54 days
General and Operations Managers	29 / 11	3 : 1		31 days
Marketing Managers	51 / 11	5 : 1		33 days

Top Posted Job Titles

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Registered Nurses	2,713 / 601	5 : 1	39 days
Staff Nurses	793 / 175	5 : 1	45 days
Employee Health Nurses	825 / 172	5 : 1	38 days
Assistant Professors	282 / 140	2 : 1	29 days
Research Analysts (Life, Physical, and Social Science)	408 / 113	4 : 1	49 days
Epidemiologists	503 / 85	6 : 1	32 days
Program Managers (Management)	295 / 66	4 : 1	48 days
Occupational Health Nurses	177 / 53	3 : 1	37 days
Postdoctoral Research Fellows	166 / 52	3 : 1	61 days
Physicians	82 / 52	2 : 1	10 days
Nurse Practitioners	242 / 50	5 : 1	43 days
Medical Directors	196 / 43	5 : 1	40 days
Research Assistants	81 / 39	2 : 1	26 days
Research Associates (Life, Physical, and Social Science)	102 / 35	3 : 1	35 days
Public Health Analysts	158 / 35	5 : 1	26 days
Healthcare Coordinators	108 / 35	3 : 1	36 days
Project Managers (Management)	107 / 34	3 : 1	30 days
Network Engineers (Computer and Mathematical)	36 / 34	1 : 1	13 days
Travel Agents	33 / 33	1 : 1	7 days
Clinical Research Coordinators	131 / 32	4 : 1	39 days
Research Scientists	166 / 32	5 : 1	39 days
Health Services Directors	76 / 29	3 : 1	30 days
Minimum Data Set (MDS) Coordinators	131 / 25	5 : 1	30 days
Health and Safety Officers	91 / 25	4 : 1	18 days
Data Analysts	122 / 24	5 : 1	51 days
Health and Wellness Directors	109 / 24	5 : 1	54 days
Directors of Research	125 / 23	5 : 1	71 days
Research Fellows (Life, Physical, and Social Science)	55 / 23	2 : 1	67 days

Patient Care Technicians (Healthcare Practitioners and Technical)	484 / 23	21 : 1		42 days
Directors of Analytics	65 / 21	3 : 1		36 days
Business Analysts (Business and Financial Operations)	70 / 21	3 : 1		40 days
Environmental Specialists (Life, Physical, and Social Science)	77 / 21	4 : 1		19 days
Healthcare Consultants	82 / 20	4 : 1		45 days
Administrative Assistants	66 / 20	3 : 1		40 days
Oncology Nurses	20 / 19	1 : 1		28 days
Nurse Educators (Healthcare Practitioners and Technical)	83 / 19	4 : 1		35 days
Nurse Managers (Healthcare Practitioners and Technical)	30 / 18	2 : 1		18 days
Clinical Managers (Management)	62 / 17	4 : 1		54 days
Surveyors	43 / 17	3 : 1		25 days
Visiting Professors	44 / 17	3 : 1		5 days
Registrars (Healthcare Practitioners and Technical)	36 / 17	2 : 1		20 days
Medical Assistants	100 / 17	6 : 1		32 days
Informatics Analysts	59 / 16	4 : 1		33 days
Research Specialists	49 / 15	3 : 1		52 days
Patient Services Managers	68 / 14	5 : 1		25 days
Biostatisticians	54 / 14	4 : 1		52 days
Design Engineers (Architecture and Engineering)	51 / 14	4 : 1		54 days
Civil Engineers	54 / 14	4 : 1		33 days
Licensed Practical Nurses (LPN)	23 / 14	2 : 1		26 days
Physician Assistants (PA)	75 / 14	5 : 1		26 days

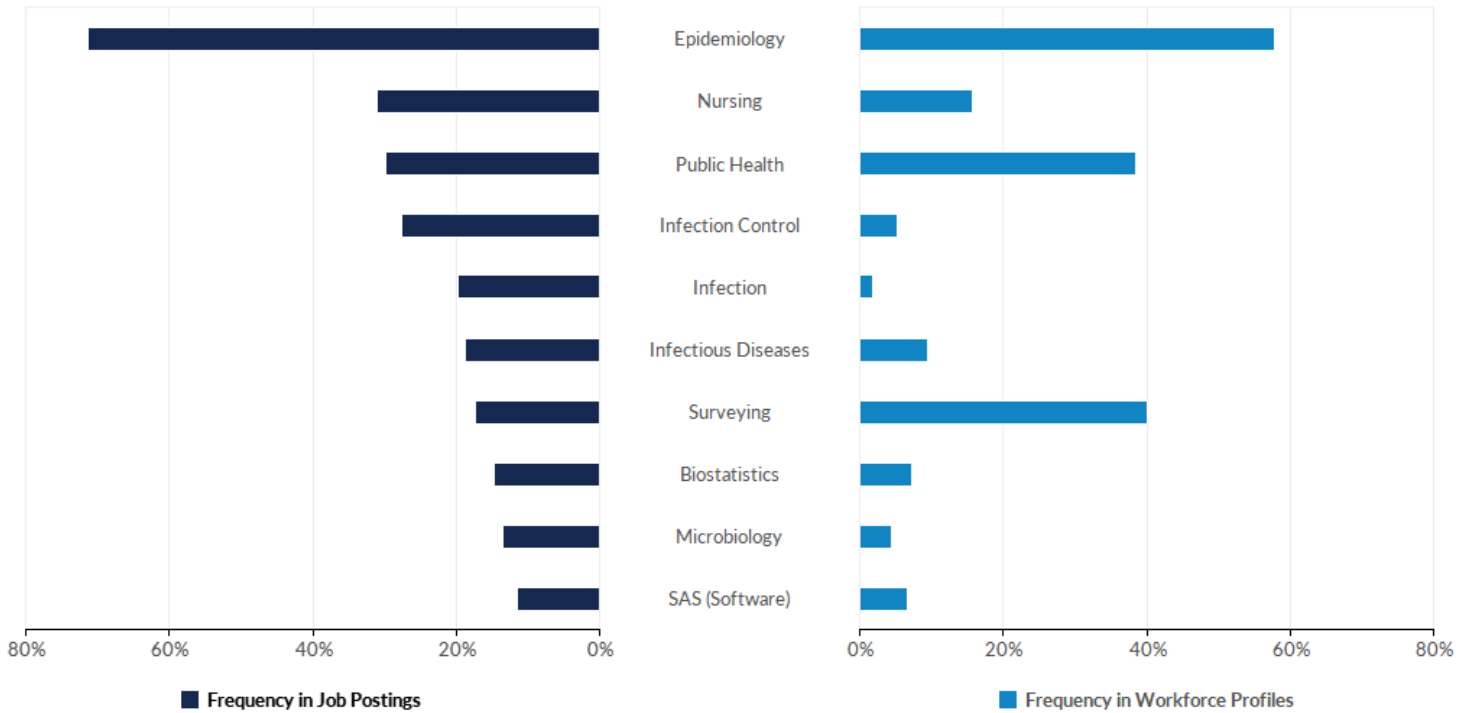
Top Industries

	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Health Care and Social Assistance	16,000 / 4,108	4 : 1 	35 days

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Emsi's job posting analytics, this comparison leverages Emsi's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

*The skills associated with workforce profiles represent workers of all education and experience levels.

Top Hard Skills



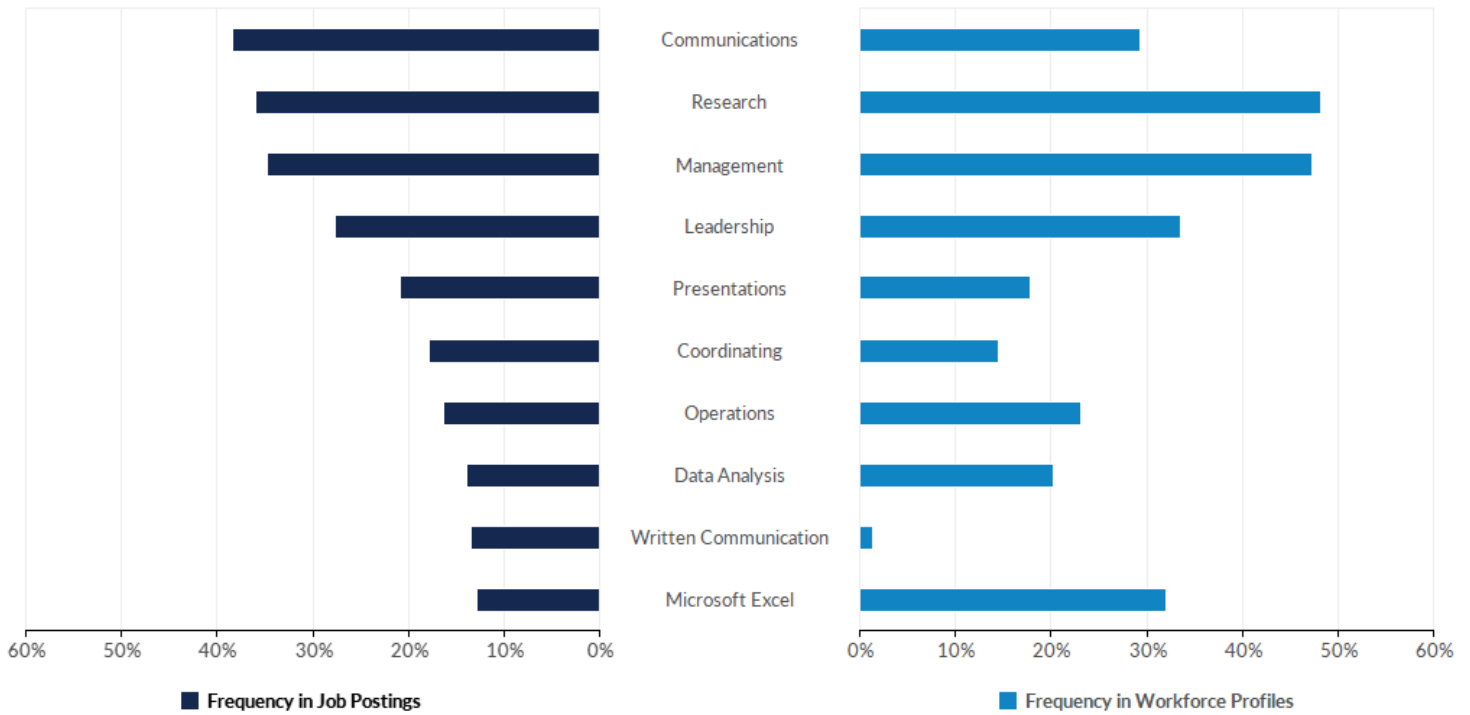
Top Hard Skills

	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Epidemiology	71%	2,934 / 4,108	58%	6,692 / 11,556
Nursing	31%	1,274 / 4,108	16%	1,828 / 11,556
Public Health	30%	1,228 / 4,108	38%	4,442 / 11,556
Infection Control	28%	1,130 / 4,108	5%	612 / 11,556
Infection	20%	810 / 4,108	2%	213 / 11,556
Infectious Diseases	19%	774 / 4,108	9%	1,094 / 11,556
Surveying	17%	716 / 4,108	40%	4,633 / 11,556
Biostatistics	15%	604 / 4,108	7%	839 / 11,556

Microbiology	13%	551 / 4,108	4%	505 / 11,556
SAS (Software)	12%	474 / 4,108	7%	776 / 11,556
Data Collection	11%	446 / 4,108	7%	861 / 11,556
Performance Improvement	10%	431 / 4,108	4%	483 / 11,556
Communicable Diseases	10%	396 / 4,108	1%	69 / 11,556
Quality Management	8%	344 / 4,108	10%	1,133 / 11,556
Statistics	8%	343 / 4,108	3%	347 / 11,556
Biology	8%	320 / 4,108	7%	789 / 11,556
Acute Care	7%	308 / 4,108	5%	559 / 11,556
Medical Records	7%	289 / 4,108	11%	1,325 / 11,556
Sterilization	7%	277 / 4,108	1%	93 / 11,556
Strategic Planning	7%	270 / 4,108	15%	1,702 / 11,556
Data Management	6%	261 / 4,108	5%	526 / 11,556
Health Technology	6%	254 / 4,108	1%	95 / 11,556
Pediatrics	6%	253 / 4,108	15%	1,703 / 11,556
Psychology	6%	253 / 4,108	8%	888 / 11,556
Patient Safety	6%	233 / 4,108	11%	1,258 / 11,556
Health Sciences	5%	220 / 4,108	3%	342 / 11,556
SPSS (Statistical Software)	5%	205 / 4,108	9%	987 / 11,556
SQL (Programming Language)	5%	197 / 4,108	4%	453 / 11,556
Economics	5%	196 / 4,108	3%	349 / 11,556
Electronic Medical Record	5%	196 / 4,108	13%	1,528 / 11,556
Cardiopulmonary Resuscitation (CPR)	5%	195 / 4,108	10%	1,164 / 11,556
Auditing	5%	194 / 4,108	10%	1,171 / 11,556
Medicaid	5%	188 / 4,108	6%	641 / 11,556
Asepsis	5%	185 / 4,108	1%	66 / 11,556
Basic Life Support	4%	171 / 4,108	7%	799 / 11,556
R (Programming Language)	4%	165 / 4,108	4%	441 / 11,556
Clinical Nursing	4%	155 / 4,108	1%	62 / 11,556

Clinical Research	4%	155 / 4,108	36%	4,114 / 11,556
Occupational Health And Safety Administration (OSHA)	4%	149 / 4,108	3%	294 / 11,556
Clinical Laboratory Science	4%	144 / 4,108	0%	0 / 11,556
Oncology	4%	144 / 4,108	7%	798 / 11,556
Adult Education	3%	143 / 4,108	1%	161 / 11,556
Statistical Softwares	3%	143 / 4,108	1%	125 / 11,556
Risk Analysis	3%	141 / 4,108	2%	252 / 11,556
Clinical Trials	3%	136 / 4,108	11%	1,315 / 11,556
Disabilities	3%	132 / 4,108	1%	172 / 11,556
Microsoft Access	3%	131 / 4,108	10%	1,109 / 11,556
Surveys	3%	131 / 4,108	5%	624 / 11,556
Medicare	3%	130 / 4,108	6%	719 / 11,556
Corrective And Preventive Action (CAPA)	3%	125 / 4,108	2%	243 / 11,556

Top Common Skills



Top Common Skills

	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Communications	38%	1,577 / 4,108	29%	3,392 / 11,556
Research	36%	1,478 / 4,108	48%	5,567 / 11,556
Management	35%	1,430 / 4,108	47%	5,468 / 11,556
Leadership	28%	1,137 / 4,108	34%	3,879 / 11,556
Presentations	21%	857 / 4,108	18%	2,067 / 11,556
Coordinating	18%	735 / 4,108	15%	1,683 / 11,556
Operations	16%	673 / 4,108	23%	2,680 / 11,556
Data Analysis	14%	569 / 4,108	20%	2,337 / 11,556
Written Communication	13%	554 / 4,108	1%	162 / 11,556
Microsoft Excel	13%	529 / 4,108	32%	3,702 / 11,556
Microsoft Office	12%	499 / 4,108	31%	3,565 / 11,556
Investigation	11%	450 / 4,108	5%	594 / 11,556
Computer Literacy	11%	445 / 4,108	3%	353 / 11,556

Teaching	10%	429 / 4,108	21%	2,395 / 11,556
Problem Solving	10%	424 / 4,108	9%	995 / 11,556
Microsoft PowerPoint	10%	424 / 4,108	26%	2,999 / 11,556
Innovation	10%	422 / 4,108	4%	478 / 11,556
Customer Service	10%	412 / 4,108	33%	3,835 / 11,556
Detail Oriented	10%	410 / 4,108	4%	473 / 11,556
Writing	10%	409 / 4,108	13%	1,527 / 11,556
Interpersonal Communications	9%	368 / 4,108	3%	359 / 11,556
Decision Making	9%	357 / 4,108	4%	478 / 11,556
Mathematics	6%	259 / 4,108	3%	380 / 11,556
Organizational Skills	6%	257 / 4,108	1%	92 / 11,556
Critical Thinking	6%	252 / 4,108	3%	357 / 11,556
Time Management	6%	252 / 4,108	8%	956 / 11,556
Teamwork	6%	246 / 4,108	6%	649 / 11,556
Professionalism	6%	244 / 4,108	1%	172 / 11,556
Valid Driver's License	6%	241 / 4,108	0%	10 / 11,556
Prioritization	5%	204 / 4,108	0%	57 / 11,556
Verbal Communication Skills	5%	190 / 4,108	1%	88 / 11,556
Microsoft Word	4%	173 / 4,108	24%	2,811 / 11,556
Career Development	4%	173 / 4,108	2%	205 / 11,556
Scheduling	4%	168 / 4,108	8%	966 / 11,556
Construction	4%	164 / 4,108	4%	468 / 11,556
Mentorship	4%	160 / 4,108	11%	1,222 / 11,556
Sales	4%	156 / 4,108	23%	2,696 / 11,556
Sanitation	4%	155 / 4,108	1%	173 / 11,556
Advocacy	4%	152 / 4,108	5%	573 / 11,556
Consulting	4%	151 / 4,108	15%	1,688 / 11,556
Microsoft Outlook	4%	148 / 4,108	11%	1,225 / 11,556
Oral Communication	3%	142 / 4,108	1%	77 / 11,556

Spreadsheets	3%	134 / 4,108	4%	437 / 11,556
Creativity	3%	130 / 4,108	0%	38 / 11,556
Program Management	3%	127 / 4,108	10%	1,170 / 11,556
Data Entry	3%	122 / 4,108	10%	1,171 / 11,556
Word Processor	3%	122 / 4,108	2%	182 / 11,556
Typing	3%	120 / 4,108	4%	429 / 11,556
Infrastructure	3%	119 / 4,108	3%	357 / 11,556
Physics	3%	109 / 4,108	1%	132 / 11,556

Top Qualifications

	Postings with Qualification
Advanced Life Support	5
Advanced Practice Registered Nurse	8
American Medical Technologists	14
American Registry Of Radiologic Technologists (ARRT) Certified	10
ANCC Certified	21
Associates Degree In Nursing	84
Bachelor of Science in Nursing (BSN)	306
Board Certified In Internal Medicine	21
CDL Class C License	6
Certified Case Manager	6
Certified Coding Specialist	11
Certified Compensation Professional	5
Certified First Responder	4
Certified Health Data Analyst	6
Certified Home Health Aide	5
Certified Medical Assistant	28
Certified Nuclear Medicine Technologist	8
Certified Nursing Assistant	43
Certified Pharmacy Technician	4
Certified Plant Engineer	5
Certified Professional Coder	12
Certified Professional In Healthcare Quality	17
Certified Safety Professional	4
Certified Tumor Registrar	25
Commercial Driver's License (CDL)	6
Doctor Of Dental Surgery (DDS)	11
Doctor Of Medicine (MD)	18
Doctor Of Pharmacy (PharmD)	25

Doctor Of Veterinary Medicine (DVM/VMD)	5
Family Nurse Practitioner	5
Infection Control Certification	666
Licensed Clinical Social Worker (LCSW)	8
Licensed Practical Nurse	72
Master Of Business Administration (MBA)	38
Medical License	12
Medical Technologist	281
Nurse Practitioner	79
Patient Care Technician	33
Professional Engineer	11
Project Management Professional Certification	12
Radiologic Technologist	8
Registered Dietitian (RD/RDN)	9
Registered Health Information Administrator	12
Registered Health Information Technician	16
Registered Practical Nurse	6
Registered Respiratory Therapist	17
Senior Professional In Human Resources	10
SHRM-CP (Society for Human Resource Management Certified Professional)	8
SHRM-SCP (Society for Human Resource Management Senior Certified Professional)	5
Trauma Nurse Core Course (TNCC)	7

Appendix A

Top Posting Sources

Website	Postings on Website (Jan 2017 - Mar 2020)
Nexxt.com	1,088
Beyond.com	470
Monster.com	409
Employmentcrossing.com	373
Glassdoor.com	365
Geebo.com	339
Dejobs.org	330
My.jobs	311
Jobs.net	301
Careerbuilder.com	284
Jobing.com	214
Resume-library.com	201
Illinois.gov	191
Disabledperson.com	188
Learn4good.com	176
Americasjobexchange.com	171
Jofdav.com	153
Careerarc.com	136
Bluecollarcrossing.com	132
Careerboard.com	123
Neuvoo.com	120
Thejobnetwork.com	120
Jobserve.com	118
Psychologicalscience.org	117
Localjobnetwork.com	101

Appendix B

Sample Postings

Infection Preventionist - Infection Prev & Control-Full time, Days

Link to Live Job Posting: click.appcast.io

Location: Summit, IL

O*NET: 29-1141.00

Company: Northwest Community Healthcare Corp

Job Title: Staff Nurses

Infection Preventionist - Infection Prev & Control-Full time,

Days Northwest Community Healthcare Summit Argo, IL Shift:

Full time, Days Reporting to the Accreditation Officer, contributes to the provision of high quality patient care by promoting and implementing infection prevention and control practices and compliance with regulatory agency requirements. Provides expert knowledge in infection control principles and practice. 1. Designs and implements the organization's infection control surveillance program in collaboration with the Infection Control Committee; communicates findings to physicians, staff, and appropriate committees; implements appropriate action when necessary. 2. Serves as a resource to the organization in infection control principles, guidelines and regulatory standards; designs and implements orientation and ongoing education programs on infection control issues for hospital staff. 3. Ensures the organization meets regulatory and accrediting body infection prevention and control standards including The Joint Commission, AAAHC, IDPH, CMS, and OSHA. 4. Assists the organization in incorporating infection control principles into their policies and procedures. Collaborates with all disciplines and departments to develop and update area-specific policies and procedures pertinent to infection control principles. 5. Collaborates with the Infectious Disease Physicians to investigate infectious outbreaks; implements action plans as necessary. 6. Collaborates with the Illinois Public Health Department in the required reporting of infections and with Employee and Occupational Health Services to follow up on infections in hospital personnel. 7. Collaborates with Employee and Occupational Health Services to investigate staff exposure to communicable diseases. Contacts appropriate individuals so that timely actions can be initiated to limit the spread of infection. 8. Reviews laboratory information as appropriate to identify potential infections. Abstracts clinical information from respective data sources, analyzes data and reports to various audiences. 9. Inspects the environment including sterilization, sanitation and disinfection practices and observes personnel activities to detect infection hazards and evaluate compliance with Infection Control Committee standards; implements appropriate action when necessary. 10. Assists team members in identifying Infection Prevention and Control goals and develop a strategy to achieve. 11. Evaluates the quality of infection control activities on a regular basis; recommends changes as appropriate. 12. Responds to exposure inquiries, crises and emergencies as appropriate and in a timely manner to provide infection control exposure support when needed, 24/7. 13. Assures Infection Prevention and Control input into the evaluation of new products being considered by the organization. 14. Adheres to all Northwest Community Hospital standards, policies, and procedures. 1. The level of knowledge normally obtained through the completion of a Bachelor's Degree in Nursing, Epidemiology or a related field such as Medical Technology. Master's Degree preferred. 2. Experience in infection prevention and control preferred. 3. Association for Practitioners in Infection Control (APIC) training course or equivalent desired. Certification in Infection Control (CIC) is preferred and required within three years of hire. 4. Computer skills, process improvement methodology and basic statistical control knowledge required. 5. Knowledge of adult education principles required; knowledge of patient care practice strongly preferred. 6. The leadership skills required to provide guidance and direction to others. 7. The analytical skills necessary to collect and analyze surveillance data, and to identify epidemiological variations in levels of disease and to develop prevention and control measures. 8. The written and verbal skills necessary to communicate in a clear, concise, and persuasive manner to all levels of the organization. 9. The ability to use a personal computer for the storage, manipulation and retrieval of data.

PHYSICAL REQUIREMENTS

Requires light physical effort. May require frequent periods of standing or walking. May require frequent lifting or moving of light weight material, occasional lifting or moving heavy weight material, or rarely lifting or moving of heavy weight material. 2. Flow of work and character of duties involves part normal and part concentrated attention along with manual coordination.

WORKING CONDITIONS

1. Conditions are acceptable. Several disagreeable elements or hazards are occasionally present, i.e.: possibility of exposure to infectious diseases, biophysical hazards and high-pressure medical gases.

Public Safety/ Transport Officer	
Link to Live Job Posting: tmh.jobscience.com	
Location: Tallahassee, FL	O*NET: 11-1011.00
Company: Tallahassee Memorial Healthcare, Inc.	Job Title: Public Safety Officers
<p>Public Safety/ Transport Officer•Full Time, 1p•10p, CDL License is must!</p> <p>Job Description Job Title:</p> <p>Public Safety/ Transport Officer•Full Time, 1p•10p, CDL License is must!</p> <p>Company Name:</p> <p>Tallahassee Memorial HealthCare Employment Type:</p> <p>Full Time Location:</p> <p>TALLAHASSEE, FL, United States Department:</p> <p>Public Assistance and Safety Salary:</p> <p>Highly Competitive Shift Hours/ Days:</p> <p>1p•10p</p> <p>Shift Details:</p> <p>Bus Driver must have</p> <p>CDL Hours/Pay Period:</p> <p>80</p> <p>Degree Required:</p> <p>High School/GED Job ID:</p> <p>20.13769</p> <p>Date Posted:</p> <p>Mar 30, 2020</p> <p>Years Experience:</p> <p>1</p>	

Job Category:

Service/Support Note:

Please read the complete description below before applying for this job. Complete Description Insure the safe transportation of colleagues, patients and visitors by transporting, patrolling and surveying all areas of hospital parking and responding to emergency situations quickly and appropriately.

Education:

+ High School Diploma or Equivalent;

Preferred:

Associate's Degree in Criminal Justice or related field.

Experience:

+ One year commercial driving experience;

Preferred:

Three years commercial driving experience.

Other training/special skills/requirements:

+ This position will be operating a TMH vehicle and requires a valid State driver's license + Required to be at least 21 years of age and with a minimum of two (2) years of licensed driving experience + Required to provide a seven (7) year driving record from the Department of Motor Vehicles prior to employment + Will have received no more than two (2) minor violations in the past three (3) years and zero (0) major violations in the past five (5) years Learn more about TMH by viewing the video below and others on our YouTube page: Tallahassee Memorial•Your Hospital for Life Original text

Director, Health Equity Data Use and Research

Link to Live Job Posting: www.jobserve.com

Location: Chicago, IL

O*NET: 11-9111.00

Company: American Medical Association

Job Title: Health Services Directors

Director, Health Equity Data Use and Research Employer Name:

American Medical Association Description Director, Health Equity Data Use & Research Chicago, IL The American Medical Association (AMA), a nonprofit, is the nation's largest professional Association of physicians. We are a unifying voice and powerful ally for America's physicians, the patients they care for, and the promise of a healthier nation. To be part of the AMA is to be part of our Mission to promote the art and science of medicine and the betterment of public health. As an employer, we are dedicated to many efforts, including employee learning and development, social responsibility, diversity and inclusion and wellness. Our well-defined culture has strongly impacted the prosperity of our organization. Our foundational values of Respect, Integrity, Innovation, Impact, Collaboration, Agility and Trust are at the core of our efforts and continue to shape the success of the AMA. We have an opportunity at our headquarters in Chicago for a Director, Health Equity Data Use & Research on our Strategy team. As part of the team, you will support building a Center for Health Equity which will be an organizational home designed to elevate the importance of and to sustain the AMAs health equity efforts. The role of the Center for Health Equity is to embed health equity across the AMA so that health equity becomes part of the practice, process, action, innovation, and organizational performance and outcomes. The best measure of our long-term success and most desired outcome is meaningful, relevant, and impactful inclusion of health equity into the strategic and operational objectives of the AMA. You will be responsible for providing leadership and direction for multiple data and research related projects focused on establishing AMA reputation as a trusted source of data and knowledge of Health Equity. Identify and manage relationships with key collaborators and external stakeholders who can provide access to large public and private health databases and reporting capabilities relevant to Health Equitys strategic plan.

Responsibilities:

Provide leadership and build the roadmap for Health Equity data, research, and evaluation related projects:

- Define and lead the overall development and infrastructure of Health Equitys data and technical roadmap
- Build a team to support data, research, and evaluation needs that will inventory existing enterprise-wide health equity data, evaluation, and research efforts; work with the VP to assess data resources and gaps in the context of the VPs organizational goals/vision and the AMAs strategic goals, and develop and implement an evaluation and research agenda that advances the work of the unit and the AMA at large
- Develop an overall strategy and manage enterprise standards for identifying, assessing, accessing, analyzing and publishing relevant information from data sources
- Lead efforts to develop and publish relevant manuscripts, fact sheets, and data reports
- Translate and use data to strengthen advocacy/policy opportunities
- Data collection, analysis, and technical support:
 - Build a database to house, track, and evaluate progress on enterprise-wide efforts to embed equity in metrics and performance plans
 - Provide technical assistance in implementing an equity lens for Enterprise-wide multiple data-related projects involving large public and private health databases
 - Provide technical and analytical expertise on epidemiologic and statistical methods to lead the development and implementation of multivariate statistical analysis to evaluate the social, system, and structural level drivers of Health Equity
 - Conduct data for equity trainings to build and strengthen organizational capacity of other data, research, and evaluation staff across the enterprise
 - Lead and carry out multiple data-related projects involving large public and private health databases in support of Health Equitys strategy by gathering requirements, developing solutions, building reports, sharing findings and providing support to Health Equity project teams, AMA senior management and external collaborators
- Identify and manage relationships with key collaborators:
 - Identify and manage relationships with key collaborators, external stakeholders and consultants relevant to Health Equity
 - Develop relationships with internal groups to embed health equity across the AMA focusing on data use, analysis and reporting

Staff Management:

- Lead, mentor and provide management oversight for professional staff
- Responsible for setting objectives, evaluating performance and developing staff
- Identify opportunities for advancing staff skills and expertise

Requirements:

- Masters degree (MA/MS) or PHD with specialization in public health, social epidemiology, health economics or other related field required
- Minimum 10 years of experience in the field of data analytics, with knowledge of healthcare and/or public health information required; minimum 5+ years in health equity data, research and/or evaluation; must have a social and structural analysis to advance health equity with specific expertise in race, gender identity, and sexual orientation data collection and analysis
- Minimum 5 years of managing people and all facets of complex solution development projects to timeline and budget, including resource allocation management and resource modeling.
- Substantive experience in the analysis of complex health related studies, including, panel, cross-sectional, uni-variate and multivariate statistical techniques
- Substantive experience analyzing primary and secondary data, and a variety of data modalities (eg, surveillance data, claims, registries, electronic health records, survey responses, patient reported outcomes, observational studies and clinical trials, and national public health and/or health care databases)
- Proven track record in organizational leadership - preferably in complex, multi-disciplinary organizations and team-building and collaboration
- Experience establishing and maintaining collaborations with national stakeholders
- Ability to demonstrate understanding of machine learning and artificial intelligence in relation to predictive models.
- Experience with Big Data trends, tools, analytic, and modeling methodologies; experience with Big Data cloud based solutions a plus.
- Comfortable with presenting to others in a clear, concise, convincing manner.
- Excellent time management and organizational skills, including ability to accurately gauge project duration, deliver on deadlines, and manage a workload with possible conflicting priorities.

The AMA offers competitive salaries, including an incentive plan; excellent benefits and progressive technology. Our office is a business casual environment and we respect work-life balance. The American Medical Association is located at 330 N. Wabash Avenue, Chicago, IL 60611 and is convenient to all public transportation in Chicago. We are an equal opportunity employer, committed to diversity in our workforce.

All qualified applicants will receive consideration for employment.

As an EOE/AA employer, the American Medical Association will not discriminate in its employment practices due to an applicant's race, color, religion, sex, age, national origin, sexual orientation, gender identity and veteran or disability status.

THE AMA IS COMMITTED TO IMPROVING THE HEALTH OF THE NATION REQ ID

Associated topics: administrative, administrative assistant, administrative staff, assist, asso, beverage, document, front desk, food, records management Comments [Scientific Research] How to Apply Apply Here Be Diverse - Join Diversity.com Tweet Candidate

Registration _____ Name / Username

- Email
- Fields with (
-) are required!
- Send to a friend
- Your Name Your Email
- Friend's Name Friend's Email Subject Message

• Please complete all fields _____ Please type text shown in purple box.

+ Information +

Shown:

1 + Print Page + +

Date Posted:

03-29-2020 + Job Location +

City:

Chicago +

State:

ILLINOIS, IL

, +

Career Level:

Professionals / Managers +

Industry:

[Scientific Research] Health/Medicine/Pharmacology +

Country:

US +

Term:

Full Time + Apply Here + Company Profile + Keywords + Director, Health Equity Data Use and Research

Infection Preventionist at HCA East Florida	
Link to Live Job Posting: Posting is no longer active	
Location: Fort Lauderdale, FL	O*NET: 29-1141.00
Company: HCA Holdings, Inc.	Job Title: Registered Nurses
<p>Job Description:</p> <p>The Infection Preventionist is responsible for comprehensive surveillance activities, applying an epidemiological approach to identification of infection prevention issues that include chart review, updating of databases and preparation of summary reports and provides clinical support to performance improvement operations, patient care delivery and Medical Directors. Assists in the dissemination of results/findings and maintains communication patterns with staff and physicians. Provides a professional consulting role and education and counseling for patients/families, staff and physicians. This position is intended to help support operational function, efficiency, quality and to improve patient outcomes. The Infection Preventionist consistently demonstrates behaviors that model the core values and the Hospital's mission statement and maintains proficiency in job and age related competencies. Acts as manager of Infection Prevention by serving as a specialist trained in hospital epidemiology. Functions as a resource consultant and educator for patients, physicians, hospital staff and community. Directly coordinates and monitors infection control for the hospital and its outpatient departments in accordance with professional and regulatory standards. Maintains the standards of nursing care as recommended by the Nursing Department's philosophy and objectives.</p> <p>Qualifications:</p> <p>Graduate of an accredited School of Nursing, Epidemiology or Public Health; Bachelor of Science preferred. If a nurse they must be licensed to practice in Florida. Special training in surveillance, prevention and control of nosocomial infections. Minimum two years' experience in infection control prevention and three years clinical experience in an acute care setting required. Certification in infection control required or must be completed within 12 months of employment.</p>	

EPC Project Manager - Design & Engineering

Link to Live Job Posting: Posting is no longer active

Location: Indianapolis, IN

O*NET: 11-9041.00

Company: Kimmel & Associates Inc

Job Title: Project Managers (Architecture and Engineering)

Search Jobvertise Jobs Jobvertise EPC Project Manager -

Design & Engineering Location:

US-IN-Indianapolis - 46298

Jobcode:

225269108 Email this job to a friend Report this Job Report this job _____ What is the problem?

- Incorrect company Incorrect location Job is expired Job may be a scam Other Apply Online or email this job to apply later About the

Company:

An EPCleader in the engineering and land surveying community. Providing comprehensive professional engineering, surveying, and construction management services for infrastructure throughout Indiana. Focusing on the planning, surveying, design, inspection and construction management of civil engineering, structural, and transportation related projects. About the

Position:

Hiring for a Design Project Manager for the Design & Engineering department, primarily focused on INDOT work.

Requirements:

Applicants must have at least 5 years of experience as a Design focused Project Manager for heavy civil construction. PandoLogic.

Appendix C - Data Sources and Calculations

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Industrial Relations; Florida Department of Economic Opportunity; Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit; Illinois Department of Employment Security, Employment Projections; Indiana Department of Workforce Development; Kentucky Office of Employment and Training; Ohio Department of Job and Family Services, Labor Market Information Division; Tennessee Department of Labor and Workforce Development, Research and Statistics Division

Program Overview

Epidemiology

Emsi Q1 2020 Data Set

April 2020

Kentucky

Parameters

Programs

Code	Description
26.1309	Epidemiology

Regions

Code	Description	Code	Description
1	Alabama	18	Indiana
12	Florida	21	Kentucky
13	Georgia	39	Ohio
17	Illinois	47	Tennessee

Education Level

Any

Tuition Type

Tuition & Fees

Graduate Status

Undergraduate

Residency

In-State

Completions Year

2018

Jobs Timeframe

2017 - 2027

Job Postings Timeframe

Jan 2017 - Mar 2020

Program Overview

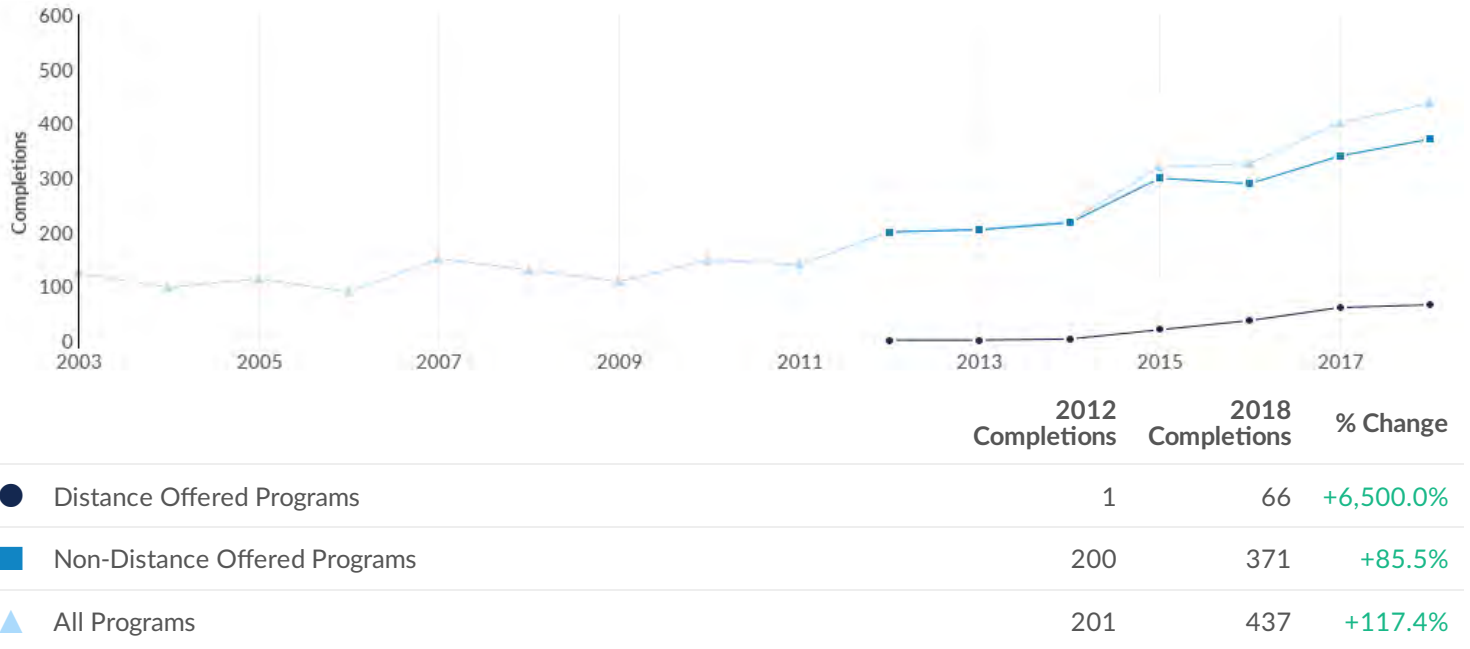


	Completions (2018)	% Completions	Institutions (2018)	% Institutions
● All Programs	437	100%	18	100%
● Distance Offered Programs	66	15%	2	11%
● Non-Distance Offered Programs	371	85%	16	89%

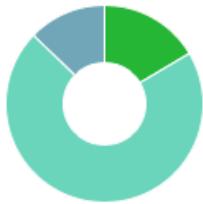
Completions by Institution

Institution	Completions (2018)	Growth % YOY (2018)	Market Share (2018)	IPEDS Tuition & Fees (2018)
Emory University	145	-6.5%	33.2%	\$51,306
University of Miami	132	13.8%	30.2%	\$50,226
Benedictine University	56	1.8%	12.8%	\$32,752
University of Cincinnati-Main Campus	24	60.0%	5.5%	\$11,000
Case Western Reserve University	15	150.0%	3.4%	\$49,042
East Tennessee State University	10	66.7%	2.3%	\$8,935
University of Alabama at Birmingham	8	33.3%	1.8%	\$8,568
University of Florida	7	-46.2%	1.6%	\$6,381
University of Memphis	5	150.0%	1.1%	\$9,317
The University of Tennessee-Health Science Center	5	25.0%	1.1%	\$10,885
University of Louisville	5	-50.0%	1.1%	\$11,656
University of Georgia	5	25.0%	1.1%	\$11,830
University of Kentucky	5	Insf. Data	1.1%	\$12,245
Indiana University-Bloomington	4	Insf. Data	0.9%	\$10,681
Wright State University-Main Campus	4	Insf. Data	0.9%	\$8,861
Vanderbilt University	3	-40.0%	0.7%	\$49,816
Indiana University-Purdue University-Indianapolis	2	0.0%	0.5%	\$9,465
University of Toledo	2	0.0%	0.5%	\$9,861

Regional Trends



Regional Completions by Award Level



Award Level	Completions (2018)	Percent
Postbaccalaureate certificate	72	16.5%
Master's Degree	309	70.7%
Doctor's Degree	56	12.8%
Award of less than 1 academic year	0	0.0%
Award of at least 1 but less than 2 academic years	0	0.0%
Associate's Degree	0	0.0%
Award of at least 2 but less than 4 academic years	0	0.0%
Bachelor's Degree	0	0.0%
Post-masters certificate	0	0.0%

Similar Programs

34

Programs (2018)

7,621

Completions (2018)

CIP Code	Program	Completions (2018)
26.0102	Biomedical Sciences, General	2,311
26.0908	Exercise Physiology	1,261
26.0202	Biochemistry	1,224
26.0503	Medical Microbiology and Bacteriology	372
30.1101	Gerontology	346

Job Postings vs. Hires

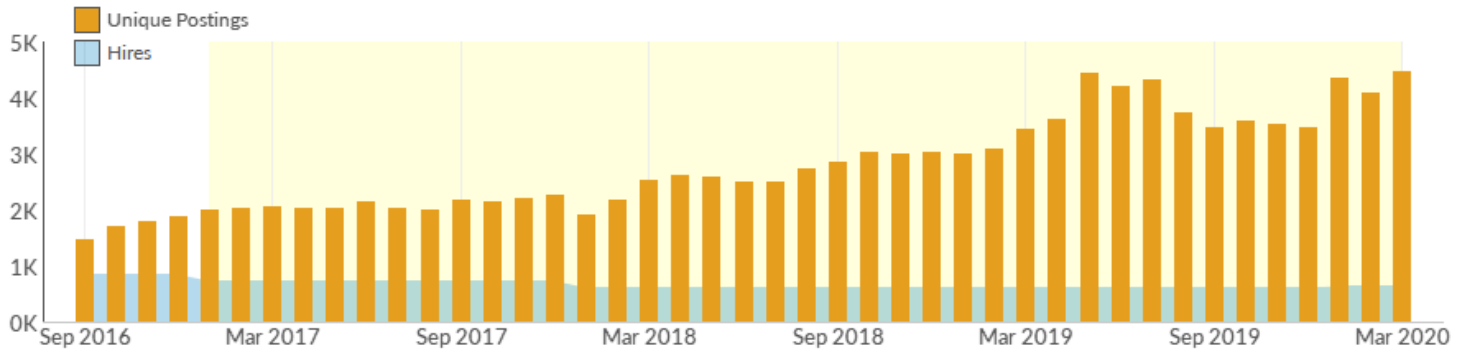
2,908

Avg. Monthly Postings (Jan 2017 - Mar 2020)

661


Avg. Monthly Hires (Jan 2017 - Mar 2020)

In an average month, there were 2,908 active job postings for 2 Occupations, and 661 actually hired. This means there was approximately 1 hire for every 4 unique job postings for 2 Occupations.



Occupation	Avg Monthly Postings (Jan 2017 - Mar 2020)	Avg Monthly Hires (Jan 2017 - Mar 2020)
Medical Scientists, Except Epidemiologists	2,815	598
Epidemiologists	93	63

Job Postings Summary

<p>36,661 Unique Postings 145,808 Total Postings</p>	<p>4 : 1 Posting Intensity  Regional Average: 4 : 1</p>	<p>36 days Median Posting Duration Regional Average: 31 days</p>
---	---	---

There were 145,808 total job postings for your selection from January 2017 to March 2020, of which 36,661 were unique. These numbers give us a Posting Intensity of 4-to-1, meaning that for every 4 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that they are putting average effort toward hiring for this position.

Target Occupations

<p>18,641 Jobs (2017) 36% below National average</p>	<p>+16.9% % Change (2017-2027) Nation: +20.9%</p>	<p>\$33.93/hr Median Hourly Earnings Nation: \$40.18/hr</p>	<p>2,195 Annual Openings</p>
--	---	--	---

Occupation	2017 Jobs	Annual Openings	Median Hourly Earnings	Growth (2017 - 2027)	Location Quotient (2017)
Medical Scientists, Except Epidemiologists	16,862	2,007	\$34.37/hr	+17.84%	0.61
Epidemiologists	1,779	188	\$30.41/hr	+7.70%	0.99

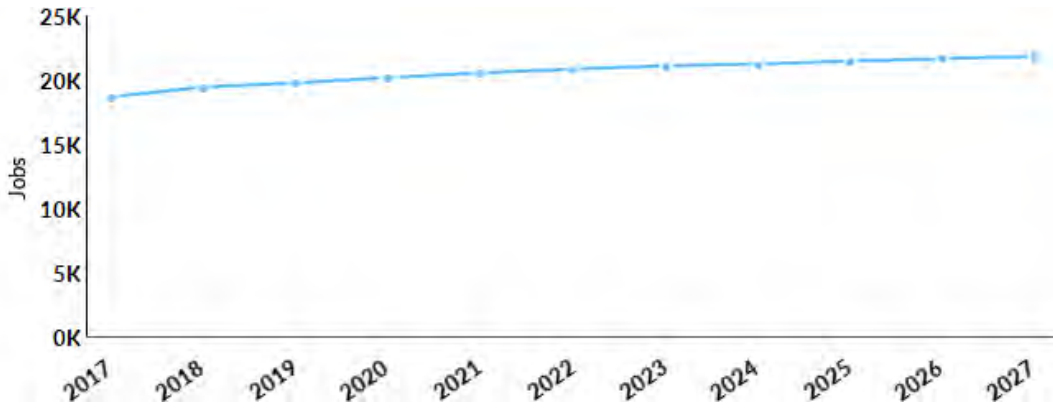
Growth

18,641
2017 Jobs

21,787
2027 Jobs

3,146
Change (2017-2027)

16.9%
% Change (2017-2027)



Occupation	2017 Jobs	2027 Jobs	Change	% Change
Epidemiologists (19-1041)	1,779	1,916	137	8%
Medical Scientists, Except Epidemiologists (19-1042)	16,862	19,871	3,009	18%

Percentile Earnings

\$24.99/hr

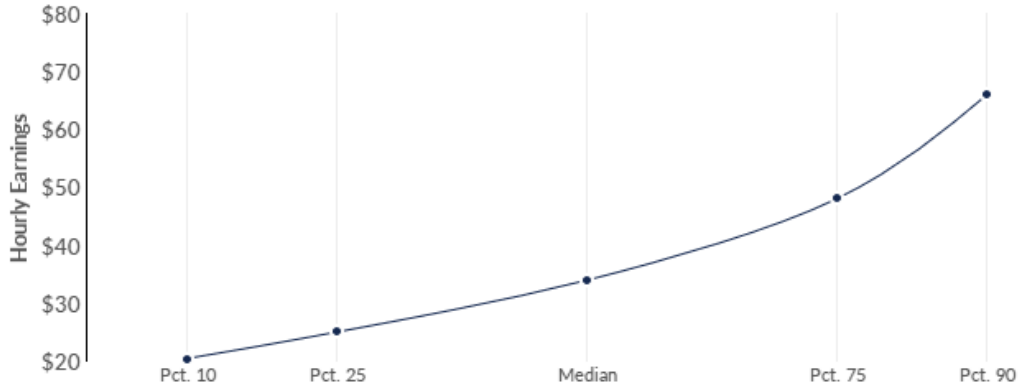
25th Percentile Earnings

\$33.93/hr

Median Earnings

\$48.02/hr

75th Percentile Earnings




Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Epidemiologists (19-1041)	\$20.65	\$30.41	\$40.24
Medical Scientists, Except Epidemiologists (19-1042)	\$25.40	\$34.37	\$49.35

Top Companies Posting

Company	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
AbbVie Inc.	7,182 / 1,730	4 : 1	44 days
University of Miami	3,852 / 843	5 : 1	46 days
Emory University	3,765 / 680	6 : 1	63 days
Eli Lilly and Company	4,857 / 674	7 : 1	53 days
University of Illinois At Chicago	1,620 / 579	3 : 1	28 days
University of Florida	1,496 / 550	3 : 1	23 days
The University of Chicago	3,182 / 541	6 : 1	47 days
University of Kentucky	4,103 / 526	8 : 1	51 days
Indiana University	1,146 / 521	2 : 1	37 days
University of Cincinnati	4,382 / 481	9 : 1	56 days
St. Jude Children's Research Hospital, Inc.	2,212 / 467	5 : 1	53 days
University of Tennessee	1,327 / 446	3 : 1	60 days
Moffitt Cancer Center	847 / 364	2 : 1	54 days
IQVIA	1,397 / 337	4 : 1	36 days
The Ohio State University	1,293 / 322	4 : 1	41 days
Northwestern University	986 / 311	3 : 1	68 days
Covance Inc.	1,851 / 306	6 : 1	36 days
Phat Jobs	383 / 305	1 : 1	9 days
Virtual Vocations	350 / 299	1 : 1	10 days
Anthem, Inc.	907 / 293	3 : 1	42 days
Children's Hospital Medical Center	1,978 / 267	7 : 1	57 days
State of Florida	1,284 / 259	5 : 1	19 days
Nationwide Children's Hospital	681 / 246	3 : 1	43 days
Rush University	1,004 / 246	4 : 1	52 days
Clinic Foundation	765 / 239	3 : 1	47 days
Bayer Corporation	480 / 228	2 : 1	17 days

Vanderbilt University	1,202 / 228	5 : 1		36 days
Ivy Exec	829 / 220	4 : 1		24 days
Johnson & Johnson	919 / 217	4 : 1		24 days
The Cleveland Clinic Foundation	408 / 208	2 : 1		11 days
Bluegrass Regional Mental Health-Mental Retardation Board, Inc.	824 / 199	4 : 1		74 days
University of Alabama	416 / 193	2 : 1		33 days
University of Illinois At Urbana-Champaign	405 / 182	2 : 1		35 days
Argonne National Laborator	507 / 166	3 : 1		64 days
Abbott Laboratories	881 / 158	6 : 1		37 days
SANOFI	455 / 152	3 : 1		46 days
Vanderbilt University Medical Center	925 / 149	6 : 1		54 days
Merck & Co., Inc.	789 / 140	6 : 1		22 days
Inventiv Health, Inc.	654 / 139	5 : 1		59 days
ASTRAZENECA PLC	465 / 138	3 : 1		27 days
J & J Family Corporation	680 / 133	5 : 1		29 days
Pfizer Inc.	369 / 126	3 : 1		28 days
E-Health Jobs	291 / 124	2 : 1		36 days
Bristol-Myers Squibb Company	442 / 122	4 : 1		30 days
ASTELLAS PHARMA INC.	1,132 / 120	9 : 1		32 days
University of Arizona	215 / 119	2 : 1		102 days
PRA Health Sciences, Inc.	144 / 118	1 : 1		5 days
Celgene Corporation	384 / 117	3 : 1		57 days
Mayo Clinic	1,114 / 115	10 : 1		58 days
Grifols Biologicals Inc.	203 / 113	2 : 1		49 days

Top Posted Job Titles

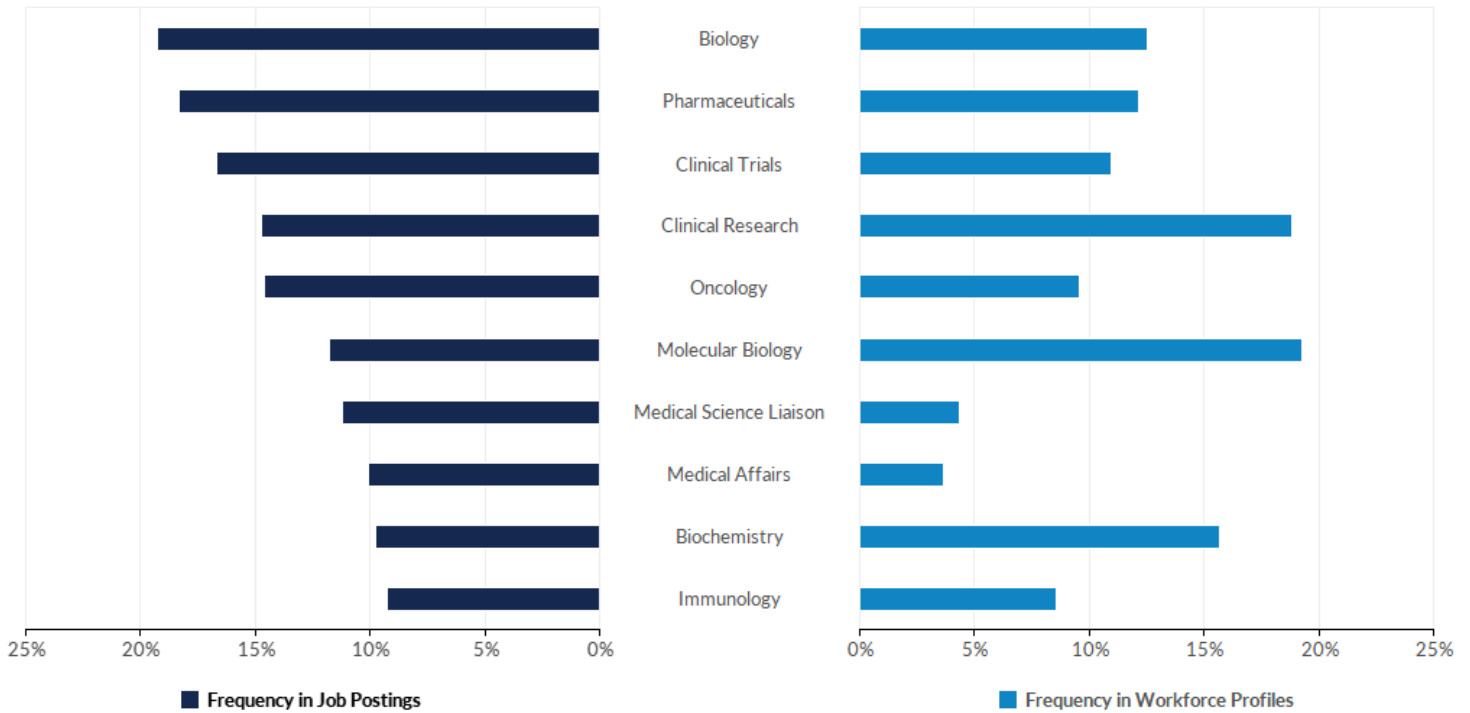
Job Title	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Medical Science Liaisons	16,130 / 4,551	4 : 1 	37 days
Postdoctoral Research Fellows	15,429 / 3,855	4 : 1 	54 days
Research Scientists	11,926 / 2,240	5 : 1 	41 days
Research Associates (Life, Physical, and Social Science)	6,954 / 1,948	4 : 1 	40 days
Clinical Laboratory Scientists	4,580 / 1,111	4 : 1 	33 days
Medical Directors	4,225 / 963	4 : 1 	38 days
Senior Scientists	3,267 / 894	4 : 1 	37 days
Biological Scientists	3,600 / 834	4 : 1 	23 days
Research Fellows (Life, Physical, and Social Science)	2,945 / 638	5 : 1 	48 days
Molecular Biology Research Associates	1,906 / 525	4 : 1 	39 days
Medical Laboratory Scientists	3,524 / 493	7 : 1 	33 days
Epidemiologists	2,258 / 434	5 : 1 	29 days
Research Specialists	1,256 / 420	3 : 1 	31 days
Development Scientists	1,968 / 403	5 : 1 	38 days
Research Scholars	1,406 / 373	4 : 1 	45 days
Geneticists	1,224 / 343	4 : 1 	47 days
Oncology Nurses	1,029 / 338	3 : 1 	29 days
Clinical Scientists	773 / 300	3 : 1 	19 days
Research Analysts (Life, Physical, and Social Science)	1,205 / 292	4 : 1 	31 days
Academic Researchers	686 / 288	2 : 1 	16 days
Research Fellows (Education, Training, and Library)	1,192 / 279	4 : 1 	45 days
Data Scientists	1,090 / 256	4 : 1 	38 days
Staff Scientists	1,743 / 252	7 : 1 	49 days
Clinical Research Coordinators	869 / 224	4 : 1 	37 days

Principal Scientists	858 / 216	4 : 1		35 days
Clinical Trials Assistants	775 / 214	4 : 1		24 days
Professors	723 / 208	3 : 1		57 days
Research Directors	780 / 198	4 : 1		38 days
Physicians	693 / 192	4 : 1		38 days
Research Investigators	617 / 188	3 : 1		42 days
Clinical Fellows	729 / 187	4 : 1		14 days
Research and Development (R&D) Scientists	757 / 182	4 : 1		32 days
Applications Scientists	546 / 180	3 : 1		41 days
Cell Culture Scientists	647 / 177	4 : 1		35 days
Analytical Scientists	1,124 / 173	6 : 1		37 days
Product Development Scientists	813 / 164	5 : 1		39 days
Molecular Biology Scientists	468 / 163	3 : 1		35 days
Research Assistants	694 / 163	4 : 1		44 days
Medical Scientists	541 / 162	3 : 1		29 days
Faculty	452 / 161	3 : 1		41 days
Physicists	560 / 155	4 : 1		42 days
Laboratory Technicians (Life, Physical, and Social Science)	698 / 149	5 : 1		35 days
Pharmacologists	504 / 148	3 : 1		26 days
Retail Sales Associates	423 / 145	3 : 1		45 days
Clinical Managers (Management)	359 / 141	3 : 1		16 days
Registered Nurses	474 / 138	3 : 1		46 days
Software Engineers	408 / 127	3 : 1		13 days
Clinical Research Associates (CRA) (Management)	457 / 122	4 : 1		30 days
Biomedical Scientists	298 / 121	2 : 1		34 days
Directors of Clinical Research	640 / 109	6 : 1		54 days

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Emsi's job posting analytics, this comparison leverages Emsi's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

*The skills associated with workforce profiles represent workers of all education and experience levels.

Top Hard Skills



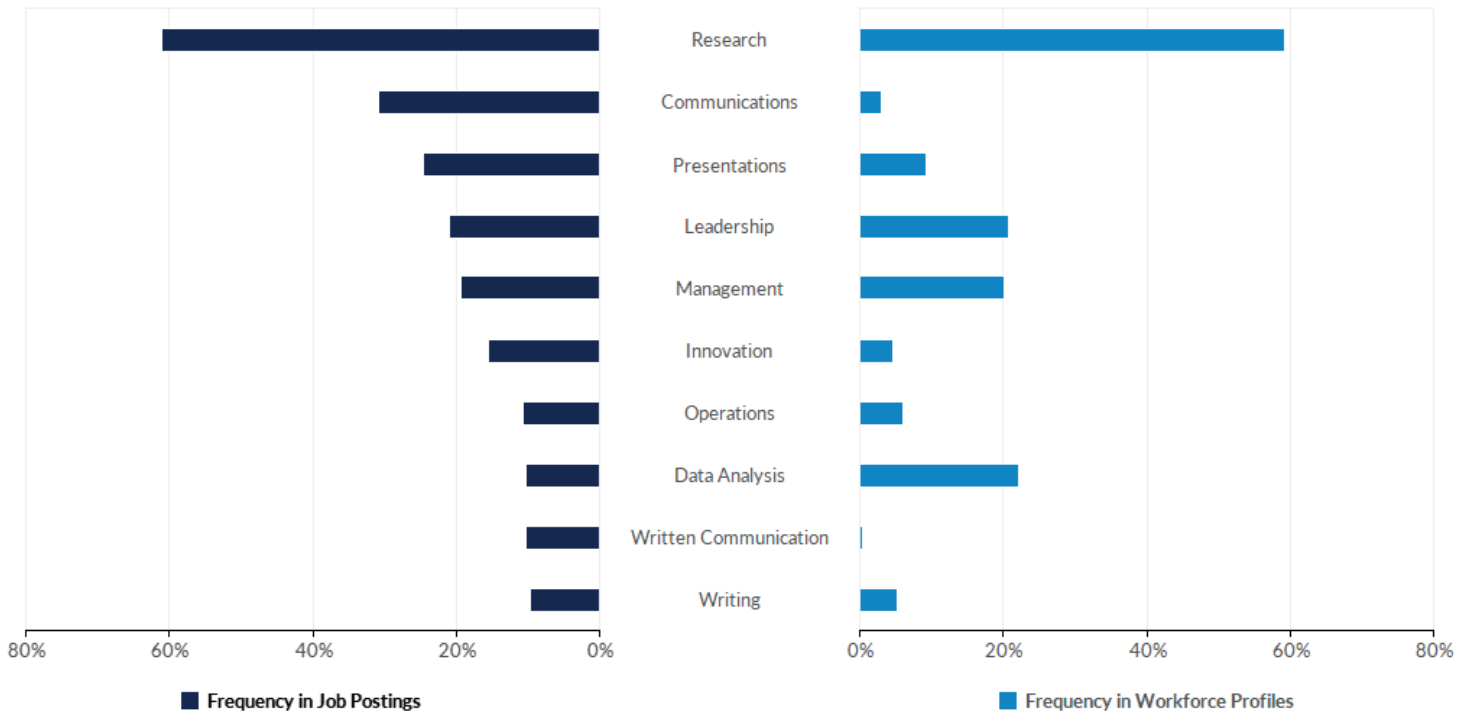
Top Hard Skills

Skill	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Biology	19%	7,071 / 36,661	13%	2,839 / 22,624
Pharmaceuticals	18%	6,715 / 36,661	12%	2,756 / 22,624
Clinical Trials	17%	6,115 / 36,661	11%	2,476 / 22,624
Clinical Research	15%	5,394 / 36,661	19%	4,258 / 22,624
Oncology	15%	5,359 / 36,661	10%	2,171 / 22,624
Molecular Biology	12%	4,324 / 36,661	19%	4,365 / 22,624
Medical Science Liaison	11%	4,101 / 36,661	4%	987 / 22,624
Medical Affairs	10%	3,697 / 36,661	4%	821 / 22,624

Biochemistry	10%	3,574 / 36,661	16%	3,543 / 22,624
Immunology	9%	3,388 / 36,661	9%	1,944 / 22,624
Cell Biology	8%	2,834 / 36,661	14%	3,080 / 22,624
Biochemical Assays	8%	2,761 / 36,661	5%	1,039 / 22,624
Pre-Clinical Development	7%	2,616 / 36,661	5%	1,177 / 22,624
Chemistry	7%	2,445 / 36,661	15%	3,319 / 22,624
Research Experiences	7%	2,393 / 36,661	1%	126 / 22,624
Epidemiology	7%	2,390 / 36,661	11%	2,524 / 22,624
Cell Cultures	6%	2,335 / 36,661	16%	3,684 / 22,624
Data Collection	6%	2,235 / 36,661	4%	794 / 22,624
Information Sciences	6%	2,206 / 36,661	0%	73 / 22,624
Drug Development	6%	2,181 / 36,661	5%	1,111 / 22,624
New Product Development	6%	2,124 / 36,661	4%	816 / 22,624
Genetics	5%	2,014 / 36,661	7%	1,640 / 22,624
Biotechnology	5%	1,977 / 36,661	13%	2,953 / 22,624
Hematology	5%	1,975 / 36,661	6%	1,446 / 22,624
Pediatrics	5%	1,881 / 36,661	5%	1,216 / 22,624
Scientific Literature	5%	1,856 / 36,661	0%	90 / 22,624
Public Health	4%	1,644 / 36,661	10%	2,248 / 22,624
Health Sciences	4%	1,592 / 36,661	2%	501 / 22,624
Genomics	4%	1,559 / 36,661	3%	786 / 22,624
Translational Research	4%	1,551 / 36,661	2%	384 / 22,624
Microbiology	4%	1,507 / 36,661	9%	1,947 / 22,624
Biostatistics	4%	1,467 / 36,661	4%	937 / 22,624
Strategic Planning	4%	1,428 / 36,661	5%	1,235 / 22,624
Clinical Practices	4%	1,407 / 36,661	0%	74 / 22,624
Medical Science	4%	1,392 / 36,661	1%	291 / 22,624
Good Clinical Practices (GCP)	4%	1,381 / 36,661	3%	656 / 22,624

Quality Control	4%	1,357 / 36,661	3%	654 / 22,624
Nursing	4%	1,356 / 36,661	4%	795 / 22,624
R (Programming Language)	4%	1,319 / 36,661	4%	973 / 22,624
Neuroscience	4%	1,318 / 36,661	5%	1,023 / 22,624
Flow Cytometry	4%	1,317 / 36,661	5%	1,083 / 22,624
Postdoctoral Research	4%	1,308 / 36,661	3%	697 / 22,624
Medical Laboratory	4%	1,306 / 36,661	7%	1,596 / 22,624
Life Sciences	3%	1,277 / 36,661	11%	2,429 / 22,624
Python (Programming Language)	3%	1,274 / 36,661	3%	737 / 22,624
Neurology	3%	1,248 / 36,661	4%	867 / 22,624
Managed Care	3%	1,199 / 36,661	3%	605 / 22,624
Drug Discovery	3%	1,198 / 36,661	5%	1,119 / 22,624
Scientific Studies	3%	1,190 / 36,661	1%	216 / 22,624
Pathology	3%	1,186 / 36,661	3%	752 / 22,624

Top Common Skills



Top Common Skills

Skill	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Research	61%	22,406 / 36,661	59%	13,411 / 22,624
Communications	31%	11,307 / 36,661	3%	700 / 22,624
Presentations	25%	9,030 / 36,661	9%	2,092 / 22,624
Leadership	21%	7,705 / 36,661	21%	4,678 / 22,624
Management	19%	7,098 / 36,661	20%	4,561 / 22,624
Innovation	16%	5,698 / 36,661	5%	1,029 / 22,624
Operations	11%	3,919 / 36,661	6%	1,388 / 22,624
Data Analysis	10%	3,754 / 36,661	22%	5,019 / 22,624
Written Communication	10%	3,735 / 36,661	0%	112 / 22,624
Writing	10%	3,534 / 36,661	5%	1,195 / 22,624
Problem Solving	9%	3,477 / 36,661	2%	489 / 22,624
Interpersonal Communications	9%	3,271 / 36,661	0%	84 / 22,624

Teaching	8%	3,051 / 36,661	21%	4,817 / 22,624
Detail Oriented	8%	2,800 / 36,661	1%	202 / 22,624
High Motivation	7%	2,724 / 36,661	0%	12 / 22,624
Sales	7%	2,664 / 36,661	9%	2,042 / 22,624
Mentorship	7%	2,637 / 36,661	5%	1,133 / 22,624
Teamwork	6%	2,163 / 36,661	4%	946 / 22,624
Microsoft Excel	6%	2,055 / 36,661	17%	3,915 / 22,624
Coordinating	6%	2,054 / 36,661	4%	814 / 22,624
Organizational Skills	6%	2,039 / 36,661	1%	115 / 22,624
Troubleshooting (Problem Solving)	5%	1,907 / 36,661	2%	427 / 22,624
Decision Making	5%	1,787 / 36,661	1%	228 / 22,624
Computer Literacy	5%	1,756 / 36,661	1%	135 / 22,624
Microsoft PowerPoint	5%	1,742 / 36,661	14%	3,240 / 22,624
Valid Driver's License	5%	1,723 / 36,661	0%	1 / 22,624
Investigation	5%	1,697 / 36,661	2%	418 / 22,624
Microsoft Office	4%	1,644 / 36,661	21%	4,853 / 22,624
Collaboration	4%	1,627 / 36,661	0%	30 / 22,624
Verbal Communication Skills	4%	1,572 / 36,661	0%	61 / 22,624
Oral Communication	4%	1,503 / 36,661	0%	42 / 22,624
Time Management	4%	1,396 / 36,661	3%	781 / 22,624
Timelines	4%	1,295 / 36,661	1%	122 / 22,624
Prioritization	3%	1,228 / 36,661	0%	39 / 22,624
Advocacy	3%	1,205 / 36,661	1%	303 / 22,624
Customer Service	3%	1,202 / 36,661	14%	3,132 / 22,624
Mathematics	3%	1,196 / 36,661	3%	610 / 22,624
Physics	3%	1,152 / 36,661	4%	841 / 22,624
Consulting	3%	1,134 / 36,661	3%	686 / 22,624
Critical Thinking	3%	963 / 36,661	2%	349 / 22,624

English Language	2%	802 / 36,661	1%	252 / 22,624
Negotiation	2%	755 / 36,661	1%	261 / 22,624
Professionalism	2%	744 / 36,661	0%	43 / 22,624
Integration	2%	734 / 36,661	1%	287 / 22,624
Self Starter	2%	732 / 36,661	0%	17 / 22,624
Enthusiasm	2%	717 / 36,661	0%	42 / 22,624
Microsoft Word	2%	680 / 36,661	13%	2,943 / 22,624
Business Acumen	2%	673 / 36,661	0%	34 / 22,624
Microsoft Outlook	2%	617 / 36,661	2%	462 / 22,624
Quality Assurance	2%	617 / 36,661	2%	491 / 22,624

Top Qualifications

Qualification	Postings with Qualification
Doctor Of Pharmacy (PharmD)	4,065
Nurse Practitioner	971
Medical License	418
Doctor Of Veterinary Medicine (DVM/VMD)	326
Medical Technologist	310
Doctor Of Medicine (MD)	296
Doctor Of Dental Surgery (DDS)	284
Bachelor of Science in Nursing (BSN)	265
Master Of Business Administration (MBA)	249
Advanced Practice Registered Nurse	142
American Medical Technologists	111
Board Certified In Internal Medicine	90
Certified Financial Planner	90
Licensed Practical Nurse	73
Certified Diabetes Educator	56
Doctor of Dental Medicine (DMD)	47
Certified Corporate Trust Specialist	42
Project Management Professional Certification	40
Clinical Nurse Specialists (CNS)	39
Systems Security Certified Practitioner	35
Infection Control Certification	33
Certified Professional Coder	28
Advanced Life Support	25
Combined Anatomic Pathology And Clinical Pathology Certification	24
Certified Tumor Registrar	24
Registered Health Information Administrator	24
ANCC Certified	23

Certification In Clinical Cytogenetics	22
Registered Health Information Technician	22
Cytogenetics Technologist Certification (CG-ASCP)	21
American Registry Of Radiologic Technologists (ARRT) Certified	21
Certified Dental Technician	21
Certified Nursing Assistant	21
Radiologic Technologist	20
Registered Dietitian (RD/RDN)	20
Certificate Of Clinical Competence In Speech-Language Pathology (CCC-SLP)	19
Certified Quality Auditor	19
Certified Coding Specialist	14
Patient Care Technician	14
Certified Internal Auditor	12
Certified Public Accountant	12
Registered Respiratory Therapist	12
Pesticide Applicator License	11
Certified Professional Medical Auditor	11
Certified Registered Nurse Anesthetist (CRNA)	11
Master Of Public Administration	11
Certified Master Trainer	11
Board Certified Oncology Pharmacist (BCOP)	10
Coder Certification	10
Licensed Clinical Social Worker (LCSW)	10

Appendix A - Data Sources and Calculations

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Industrial Relations; Florida Department of Economic Opportunity; Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit; Illinois Department of Employment Security, Employment Projections; Indiana Department of Workforce Development; Kentucky Office of Employment and Training; Ohio Department of Job and Family Services, Labor Market Information Division; Tennessee Department of Labor and Workforce Development, Research and Statistics Division

Program Overview

Epidemiology

Emsi Q2 2020 Data Set

April 2020

Kentucky

Parameters

Programs

Code	Description
26.1309	Epidemiology

Regions

Code	Description	Code	Description
1	Alabama	18	Indiana
12	Florida	21	Kentucky
13	Georgia	39	Ohio
17	Illinois	47	Tennessee

Program Modality

Distance Offered Programs

Education Level

Any

Tuition Type

Tuition & Fees

Graduate Status

Undergraduate

Residency

In-State

Completions Year

2018

Jobs Timeframe

2017 - 2027

Job Postings Timeframe

Jan 2017 - Mar 2020

Program Overview

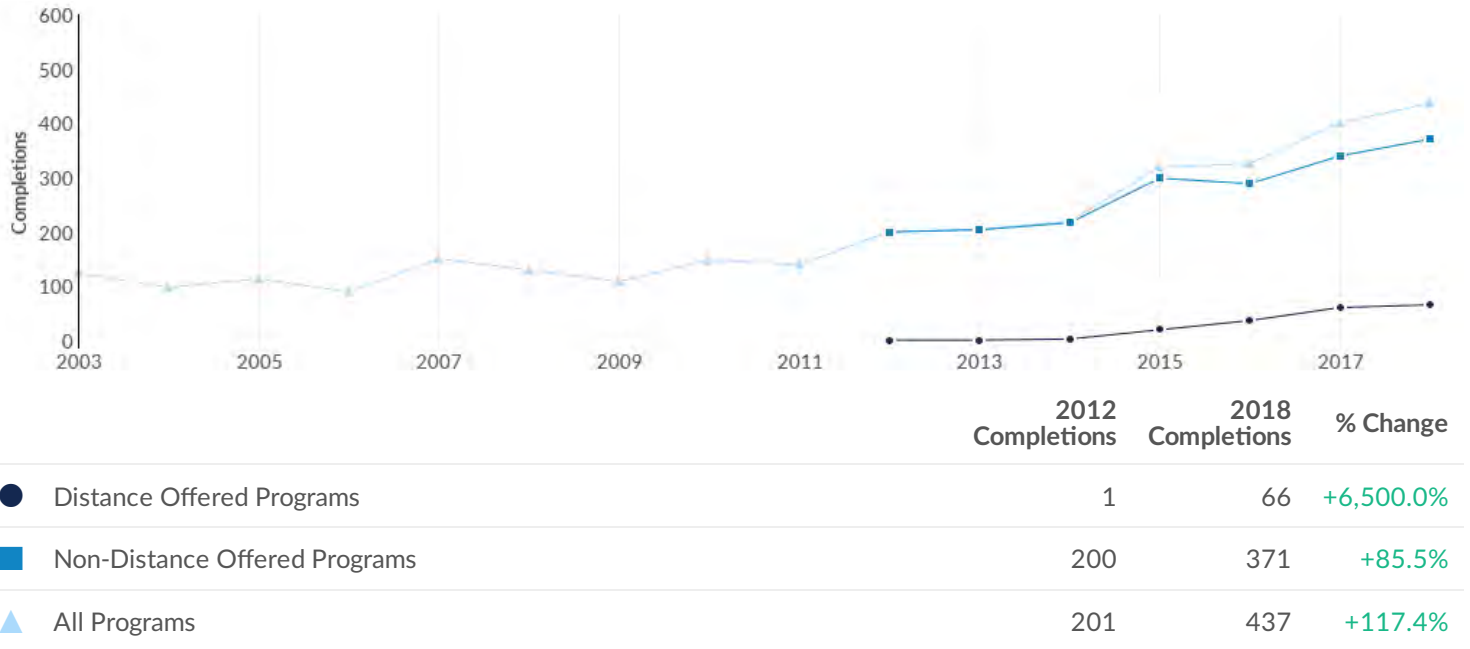


	Completions (2018)	% Completions	Institutions (2018)	% Institutions
● All Programs	437	100%	18	100%
● Distance Offered Programs	66	15%	2	11%
● Non-Distance Offered Programs	371	85%	16	89%

Completions by Institution

Institution	Distance Offered Completions (2018)	Growth % YOY (2018)	Market Share (2018)	IPEDS Tuition & Fees (2018)
Benedictine University	56	1.8%	84.8%	\$32,752
East Tennessee State University	10	66.7%	15.2%	\$8,935

Regional Trends



Regional Completions by Award Level



Award Level	Distance Offered Completions (2018)	Percent
Postbaccalaureate certificate	66	100.0%
Award of less than 1 academic year	0	0.0%
Award of at least 1 but less than 2 academic years	0	0.0%
Associate's Degree	0	0.0%
Award of at least 2 but less than 4 academic years	0	0.0%
Bachelor's Degree	0	0.0%
Master's Degree	0	0.0%
Post-masters certificate	0	0.0%
Doctor's Degree	0	0.0%

Similar Programs

12

Programs (2018)

834

Completions (2018)

CIP Code	Program	Distance Offered Completions (2018)
26.0908	Exercise Physiology	263
26.0503	Medical Microbiology and Bacteriology	244
26.0901	Physiology, General	147
30.1101	Gerontology	105
51.2010	Pharmaceutical Sciences	27

Job Postings vs. Hires

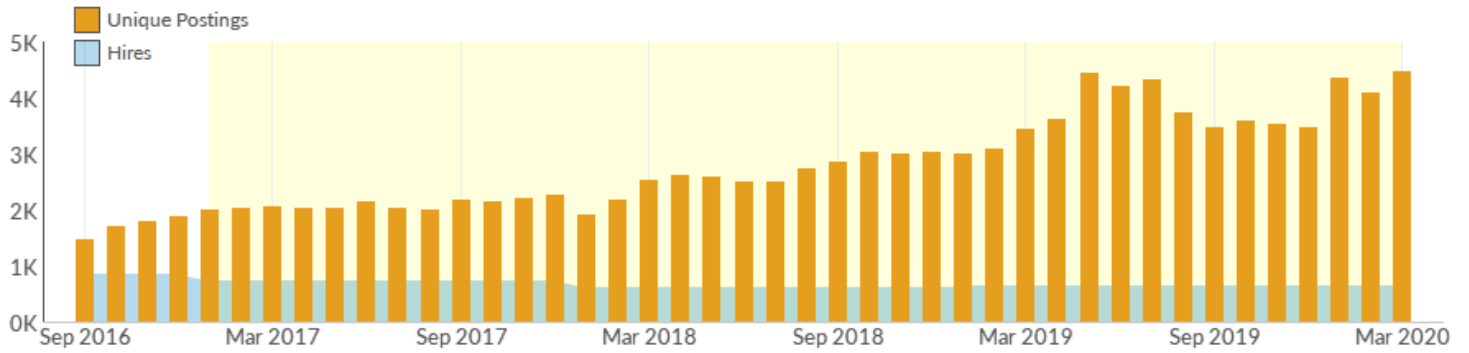
2,908

Avg. Monthly Postings (Jan 2017 - Mar 2020)

673


Avg. Monthly Hires (Jan 2017 - Mar 2020)

In an average month, there were 2,908 active job postings for 2 Occupations, and 673 actually hired. This means there was approximately 1 hire for every 4 unique job postings for 2 Occupations.



Occupation	Avg Monthly Postings (Jan 2017 - Mar 2020)	Avg Monthly Hires (Jan 2017 - Mar 2020)
Medical Scientists, Except Epidemiologists	2,815	607
Epidemiologists	93	66

Job Postings Summary

<p>36,666 Unique Postings 145,922 Total Postings</p>	<p>4 : 1 Posting Intensity  Regional Average: 4 : 1</p>	<p>36 days Median Posting Duration Regional Average: 31 days</p>
---	---	---

There were 145,922 total job postings for your selection from January 2017 to March 2020, of which 36,666 were unique. These numbers give us a Posting Intensity of 4-to-1, meaning that for every 4 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that they are putting average effort toward hiring for this position.

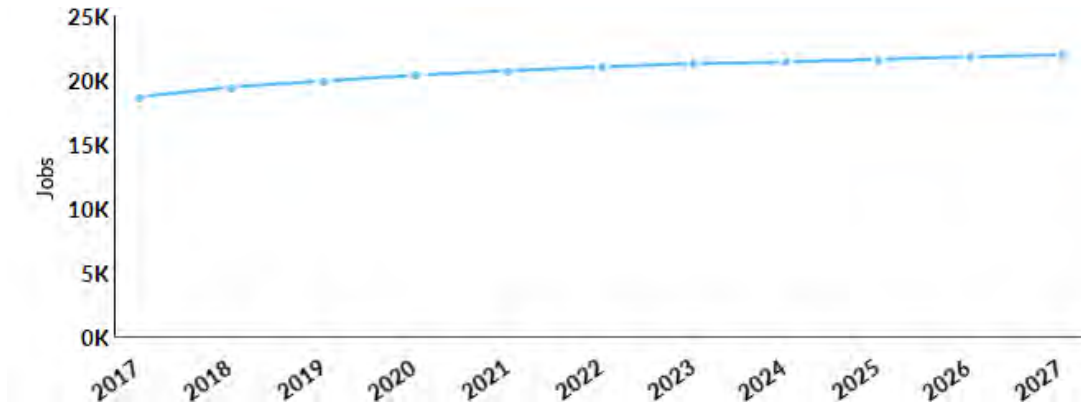
Target Occupations

<p>18,641 Jobs (2017) 36% below National average</p>	<p>+17.6% % Change (2017-2027) Nation: +22.1%</p>	<p>\$33.93/hr Median Hourly Earnings Nation: \$40.18/hr</p>	<p>2,230 Annual Openings</p>
--	---	--	---

Occupation	2017 Jobs	Annual Openings	Median Hourly Earnings	Growth (2017 - 2027)	Location Quotient (2017)
Medical Scientists, Except Epidemiologists	16,862	2,042	\$34.37/hr	+18.68%	0.61
Epidemiologists	1,779	188	\$30.41/hr	+7.20%	0.99

Growth

<p>18,641</p> <p>2017 Jobs</p>	<p>21,920</p> <p>2027 Jobs</p>	<p>3,279</p> <p>Change (2017-2027)</p>	<p>17.6%</p> <p>% Change (2017-2027)</p>
--------------------------------	--------------------------------	--	--



Occupation	2017 Jobs	2027 Jobs	Change	% Change
Epidemiologists (19-1041)	1,779	1,907	128	7%
Medical Scientists, Except Epidemiologists (19-1042)	16,862	20,012	3,150	19%

Percentile Earnings

\$24.99/hr

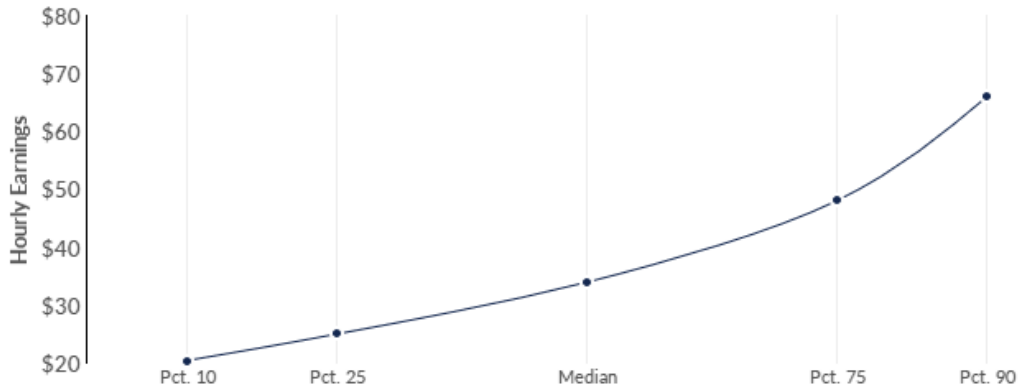
25th Percentile Earnings

\$33.93/hr

Median Earnings

\$48.02/hr

75th Percentile Earnings











Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Epidemiologists (19-1041)	\$20.65	\$30.41	\$40.24
Medical Scientists, Except Epidemiologists (19-1042)	\$25.40	\$34.37	\$49.35

Top Companies Posting

Company	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
AbbVie Inc.	7,184 / 1,730	4 : 1	44 days
University of Miami	3,854 / 843	5 : 1	46 days
Emory University	3,787 / 681	6 : 1	63 days
Eli Lilly and Company	4,862 / 675	7 : 1	53 days
University of Illinois At Chicago	1,620 / 579	3 : 1	28 days
University of Florida	1,496 / 550	3 : 1	23 days
The University of Chicago	3,182 / 541	6 : 1	47 days
University of Kentucky	4,103 / 526	8 : 1	51 days
Indiana University	1,146 / 521	2 : 1	37 days
University of Cincinnati	4,390 / 481	9 : 1	56 days
St. Jude Children's Research Hospital, Inc.	2,216 / 467	5 : 1	53 days
University of Tennessee	1,327 / 446	3 : 1	60 days
Moffitt Cancer Center	848 / 364	2 : 1	54 days
IQVIA	1,397 / 337	4 : 1	36 days
The Ohio State University	1,293 / 322	4 : 1	41 days
Northwestern University	986 / 311	3 : 1	68 days
Covance Inc.	1,851 / 306	6 : 1	36 days
Phat Jobs	383 / 305	1 : 1	9 days
Virtual Vocations	350 / 299	1 : 1	10 days
Anthem, Inc.	907 / 293	3 : 1	42 days
Children's Hospital Medical Center	1,980 / 267	7 : 1	57 days
State of Florida	1,284 / 259	5 : 1	19 days
Nationwide Children's Hospital	683 / 246	3 : 1	43 days
Rush University	1,004 / 246	4 : 1	52 days
Clinic Foundation	768 / 239	3 : 1	47 days
Bayer Corporation	480 / 228	2 : 1	17 days

Vanderbilt University	1,204 / 228	5 : 1		36 days
Ivy Exec	829 / 220	4 : 1		24 days
Johnson & Johnson	919 / 217	4 : 1		24 days
The Cleveland Clinic Foundation	408 / 208	2 : 1		11 days
Bluegrass Regional Mental Health-Mental Retardation Board, Inc.	824 / 199	4 : 1		74 days
University of Alabama	416 / 193	2 : 1		33 days
University of Illinois At Urbana-Champaign	405 / 182	2 : 1		35 days
Argonne National Laborator	507 / 166	3 : 1		64 days
Abbott Laboratories	881 / 158	6 : 1		37 days
SANOFI	455 / 152	3 : 1		46 days
Vanderbilt University Medical Center	925 / 149	6 : 1		54 days
Merck & Co., Inc.	789 / 140	6 : 1		22 days
Inventiv Health, Inc.	654 / 139	5 : 1		59 days
ASTRAZENECA PLC	465 / 138	3 : 1		27 days
J & J Family Corporation	680 / 133	5 : 1		29 days
Pfizer Inc.	369 / 126	3 : 1		28 days
E-Health Jobs	291 / 124	2 : 1		36 days
Bristol-Myers Squibb Company	452 / 123	4 : 1		30 days
ASTELLAS PHARMA INC.	1,132 / 120	9 : 1		32 days
University of Arizona	215 / 119	2 : 1		102 days
PRA Health Sciences, Inc.	144 / 118	1 : 1		5 days
Celgene Corporation	384 / 117	3 : 1		57 days
Mayo Clinic	1,114 / 115	10 : 1		58 days
Grifols Biologicals Inc.	203 / 113	2 : 1		49 days

Top Posted Job Titles

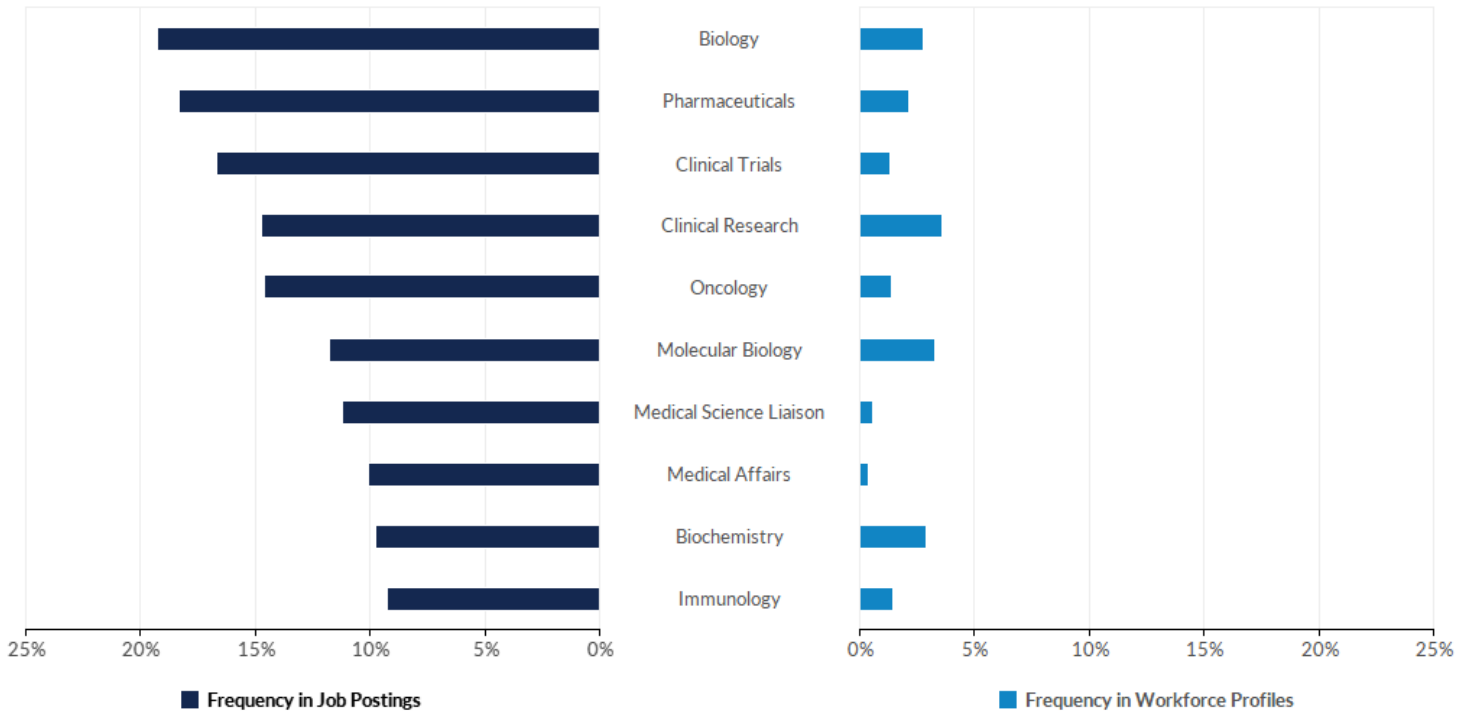
Job Title	Total/Unique (Jan 2017 - Mar 2020)	Posting Intensity	Median Posting Duration
Medical Science Liaisons	16,142 / 4,552	4 : 1 	37 days
Postdoctoral Research Fellows	15,459 / 3,856	4 : 1 	54 days
Research Scientists	11,940 / 2,241	5 : 1 	41 days
Research Associates (Life, Physical, and Social Science)	6,957 / 1,948	4 : 1 	40 days
Clinical Laboratory Scientists	4,584 / 1,111	4 : 1 	33 days
Medical Directors	4,228 / 963	4 : 1 	38 days
Senior Scientists	3,267 / 894	4 : 1 	37 days
Biological Scientists	3,600 / 834	4 : 1 	23 days
Research Fellows (Life, Physical, and Social Science)	2,945 / 638	5 : 1 	48 days
Molecular Biology Research Associates	1,908 / 525	4 : 1 	39 days
Medical Laboratory Scientists	3,524 / 493	7 : 1 	33 days
Epidemiologists	2,258 / 434	5 : 1 	29 days
Research Specialists	1,258 / 420	3 : 1 	31 days
Development Scientists	1,968 / 403	5 : 1 	38 days
Research Scholars	1,406 / 373	4 : 1 	45 days
Geneticists	1,225 / 343	4 : 1 	47 days
Oncology Nurses	1,029 / 338	3 : 1 	29 days
Clinical Scientists	775 / 300	3 : 1 	19 days
Research Analysts (Life, Physical, and Social Science)	1,205 / 292	4 : 1 	31 days
Academic Researchers	686 / 288	2 : 1 	16 days
Research Fellows (Education, Training, and Library)	1,192 / 279	4 : 1 	45 days
Data Scientists	1,090 / 256	4 : 1 	38 days
Staff Scientists	1,747 / 252	7 : 1 	49 days
Clinical Research Coordinators	873 / 224	4 : 1 	37 days

Principal Scientists	858 / 216	4 : 1		35 days
Clinical Trials Assistants	775 / 214	4 : 1		24 days
Professors	724 / 208	3 : 1		57 days
Research Directors	780 / 198	4 : 1		38 days
Physicians	694 / 192	4 : 1		38 days
Research Investigators	618 / 188	3 : 1		42 days
Clinical Fellows	729 / 187	4 : 1		14 days
Research and Development (R&D) Scientists	757 / 182	4 : 1		32 days
Applications Scientists	546 / 180	3 : 1		41 days
Cell Culture Scientists	647 / 177	4 : 1		35 days
Analytical Scientists	1,124 / 173	6 : 1		37 days
Product Development Scientists	814 / 164	5 : 1		39 days
Research Assistants	694 / 163	4 : 1		44 days
Medical Scientists	541 / 162	3 : 1		29 days
Molecular Biology Scientists	468 / 162	3 : 1		35 days
Faculty	452 / 161	3 : 1		41 days
Physicists	560 / 155	4 : 1		42 days
Laboratory Technicians (Life, Physical, and Social Science)	698 / 149	5 : 1		35 days
Pharmacologists	504 / 148	3 : 1		26 days
Retail Sales Associates	423 / 145	3 : 1		45 days
Clinical Managers (Management)	359 / 141	3 : 1		16 days
Registered Nurses	477 / 138	3 : 1		46 days
Software Engineers	408 / 127	3 : 1		13 days
Clinical Research Associates (CRA) (Management)	457 / 122	4 : 1		30 days
Biomedical Scientists	298 / 121	2 : 1		34 days
Directors of Clinical Research	641 / 109	6 : 1		54 days

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Emsi's job posting analytics, this comparison leverages Emsi's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

*The skills associated with workforce profiles represent workers of all education and experience levels.

Top Hard Skills



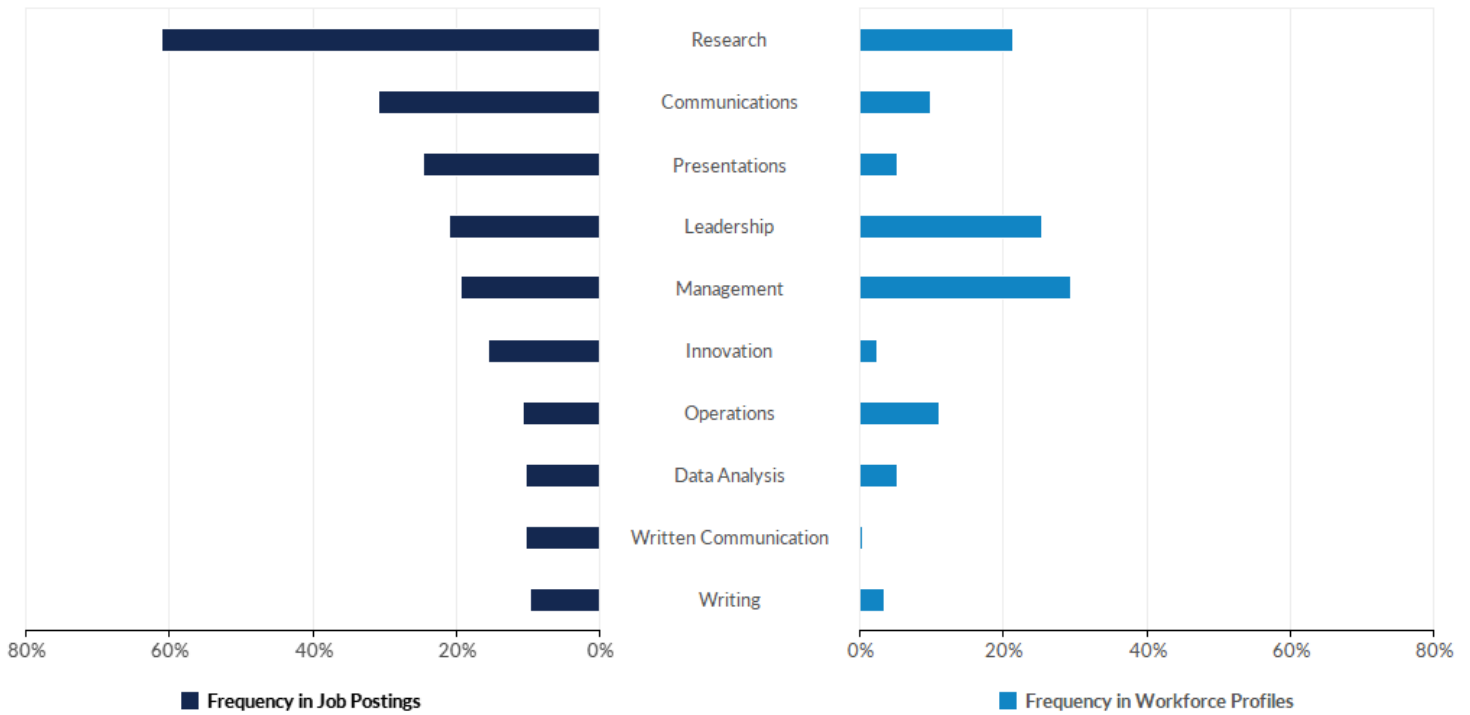
Top Hard Skills

Skill	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Biology	19%	7,072 / 36,666	3%	798 / 29,023
Pharmaceuticals	18%	6,715 / 36,666	2%	623 / 29,023
Clinical Trials	17%	6,117 / 36,666	1%	377 / 29,023
Clinical Research	15%	5,396 / 36,666	4%	1,044 / 29,023
Oncology	15%	5,360 / 36,666	1%	408 / 29,023
Molecular Biology	12%	4,324 / 36,666	3%	956 / 29,023
Medical Science Liaison	11%	4,101 / 36,666	1%	161 / 29,023
Medical Affairs	10%	3,698 / 36,666	0%	107 / 29,023

Biochemistry	10%	3,574 / 36,666	3%	842 / 29,023
Immunology	9%	3,388 / 36,666	1%	416 / 29,023
Cell Biology	8%	2,834 / 36,666	2%	688 / 29,023
Biochemical Assays	8%	2,761 / 36,666	1%	241 / 29,023
Pre-Clinical Development	7%	2,616 / 36,666	0%	132 / 29,023
Chemistry	7%	2,445 / 36,666	3%	866 / 29,023
Research Experiences	7%	2,393 / 36,666	0%	0 / 29,023
Epidemiology	7%	2,390 / 36,666	2%	516 / 29,023
Cell Cultures	6%	2,335 / 36,666	3%	780 / 29,023
Data Collection	6%	2,235 / 36,666	1%	173 / 29,023
Information Sciences	6%	2,207 / 36,666	0%	0 / 29,023
Drug Development	6%	2,182 / 36,666	1%	151 / 29,023
New Product Development	6%	2,125 / 36,666	3%	930 / 29,023
Genetics	5%	2,014 / 36,666	1%	352 / 29,023
Biotechnology	5%	1,977 / 36,666	2%	582 / 29,023
Hematology	5%	1,975 / 36,666	1%	393 / 29,023
Pediatrics	5%	1,881 / 36,666	2%	460 / 29,023
Scientific Literature	5%	1,856 / 36,666	0%	0 / 29,023
Public Health	4%	1,645 / 36,666	1%	415 / 29,023
Health Sciences	4%	1,592 / 36,666	0%	121 / 29,023
Genomics	4%	1,559 / 36,666	1%	179 / 29,023
Translational Research	4%	1,551 / 36,666	0%	47 / 29,023
Microbiology	4%	1,507 / 36,666	2%	545 / 29,023
Biostatistics	4%	1,468 / 36,666	1%	171 / 29,023
Strategic Planning	4%	1,428 / 36,666	10%	2,860 / 29,023
Clinical Practices	4%	1,407 / 36,666	0%	0 / 29,023
Medical Science	4%	1,392 / 36,666	0%	77 / 29,023
Good Clinical Practices (GCP)	4%	1,383 / 36,666	0%	119 / 29,023

Quality Control	4%	1,357 / 36,666	1%	432 / 29,023
Nursing	4%	1,356 / 36,666	3%	755 / 29,023
R (Programming Language)	4%	1,320 / 36,666	1%	305 / 29,023
Neuroscience	4%	1,319 / 36,666	1%	167 / 29,023
Flow Cytometry	4%	1,317 / 36,666	1%	220 / 29,023
Postdoctoral Research	4%	1,309 / 36,666	0%	120 / 29,023
Medical Laboratory	4%	1,306 / 36,666	2%	474 / 29,023
Life Sciences	3%	1,277 / 36,666	2%	456 / 29,023
Python (Programming Language)	3%	1,275 / 36,666	1%	330 / 29,023
Neurology	3%	1,248 / 36,666	1%	191 / 29,023
Managed Care	3%	1,199 / 36,666	1%	219 / 29,023
Drug Discovery	3%	1,198 / 36,666	1%	189 / 29,023
Scientific Studies	3%	1,190 / 36,666	0%	0 / 29,023
Pathology	3%	1,187 / 36,666	1%	215 / 29,023

Top Common Skills



Top Common Skills

Skill	Frequency in Postings	Postings with Skill / Total Postings (Jan 2017 - Mar 2020)	Frequency in Profiles	Profiles with Skill / Total Profiles (2018 - 2020)
Research	61%	22,410 / 36,666	21%	6,184 / 29,023
Communications	31%	11,309 / 36,666	10%	2,855 / 29,023
Presentations	25%	9,033 / 36,666	5%	1,518 / 29,023
Leadership	21%	7,706 / 36,666	25%	7,375 / 29,023
Management	19%	7,101 / 36,666	29%	8,530 / 29,023
Innovation	16%	5,699 / 36,666	2%	686 / 29,023
Operations	11%	3,919 / 36,666	11%	3,216 / 29,023
Data Analysis	10%	3,756 / 36,666	5%	1,543 / 29,023
Written Communication	10%	3,736 / 36,666	0%	137 / 29,023
Writing	10%	3,535 / 36,666	3%	999 / 29,023
Problem Solving	9%	3,478 / 36,666	2%	666 / 29,023
Interpersonal Communications	9%	3,272 / 36,666	1%	387 / 29,023

Teaching	8%	3,051 / 36,666	9%	2,708 / 29,023
Detail Oriented	8%	2,801 / 36,666	2%	571 / 29,023
High Motivation	7%	2,725 / 36,666	0%	14 / 29,023
Sales	7%	2,664 / 36,666	24%	7,027 / 29,023
Mentorship	7%	2,637 / 36,666	4%	1,175 / 29,023
Teamwork	6%	2,164 / 36,666	4%	1,221 / 29,023
Microsoft Excel	6%	2,055 / 36,666	19%	5,423 / 29,023
Coordinating	6%	2,054 / 36,666	4%	1,114 / 29,023
Organizational Skills	6%	2,039 / 36,666	0%	143 / 29,023
Troubleshooting (Problem Solving)	5%	1,907 / 36,666	3%	860 / 29,023
Decision Making	5%	1,787 / 36,666	1%	303 / 29,023
Computer Literacy	5%	1,756 / 36,666	2%	473 / 29,023
Microsoft PowerPoint	5%	1,742 / 36,666	13%	3,801 / 29,023
Valid Driver's License	5%	1,723 / 36,666	0%	4 / 29,023
Investigation	5%	1,697 / 36,666	1%	364 / 29,023
Microsoft Office	4%	1,644 / 36,666	21%	6,040 / 29,023
Collaboration	4%	1,629 / 36,666	0%	10 / 29,023
Verbal Communication Skills	4%	1,573 / 36,666	0%	117 / 29,023
Oral Communication	4%	1,505 / 36,666	0%	29 / 29,023
Time Management	4%	1,396 / 36,666	6%	1,676 / 29,023
Timelines	4%	1,296 / 36,666	0%	87 / 29,023
Prioritization	3%	1,229 / 36,666	0%	46 / 29,023
Advocacy	3%	1,205 / 36,666	1%	227 / 29,023
Customer Service	3%	1,202 / 36,666	29%	8,294 / 29,023
Mathematics	3%	1,196 / 36,666	2%	443 / 29,023
Physics	3%	1,152 / 36,666	1%	311 / 29,023
Consulting	3%	1,134 / 36,666	3%	954 / 29,023
Critical Thinking	3%	963 / 36,666	1%	352 / 29,023

English Language	2%	802 / 36,666	4%	1,029 / 29,023
Negotiation	2%	755 / 36,666	5%	1,511 / 29,023
Professionalism	2%	744 / 36,666	1%	162 / 29,023
Integration	2%	734 / 36,666	2%	667 / 29,023
Self Starter	2%	732 / 36,666	0%	43 / 29,023
Enthusiasm	2%	717 / 36,666	0%	29 / 29,023
Microsoft Word	2%	680 / 36,666	14%	3,951 / 29,023
Business Acumen	2%	673 / 36,666	0%	48 / 29,023
Microsoft Outlook	2%	617 / 36,666	5%	1,469 / 29,023
Quality Assurance	2%	617 / 36,666	2%	474 / 29,023

Top Qualifications

Qualification	Postings with Qualification
Doctor Of Pharmacy (PharmD)	4,066
Nurse Practitioner	971
Medical License	418
Doctor Of Veterinary Medicine (DVM/VMD)	326
Medical Technologist	310
Doctor Of Medicine (MD)	297
Doctor Of Dental Surgery (DDS)	286
Bachelor of Science in Nursing (BSN)	265
Master Of Business Administration (MBA)	249
Advanced Practice Registered Nurse	142
American Medical Technologists	111
Board Certified In Internal Medicine	90
Certified Financial Planner	90
Licensed Practical Nurse	73
Certified Diabetes Educator	56
Doctor of Dental Medicine (DMD)	47
Certified Corporate Trust Specialist	42
Project Management Professional Certification	40
Clinical Nurse Specialists (CNS)	39
Systems Security Certified Practitioner	35
Infection Control Certification	33
Certified Professional Coder	28
Advanced Life Support	25
Combined Anatomic Pathology And Clinical Pathology Certification	24
Certified Tumor Registrar	24
Registered Health Information Administrator	24
ANCC Certified	23

Certification In Clinical Cytogenetics	22
Registered Health Information Technician	22
Cytogenetics Technologist Certification (CG-ASCP)	21
American Registry Of Radiologic Technologists (ARRT) Certified	21
Certified Dental Technician	21
Certified Nursing Assistant	21
Radiologic Technologist	20
Registered Dietitian (RD/RDN)	20
Certificate Of Clinical Competence In Speech-Language Pathology (CCC-SLP)	19
Certified Quality Auditor	19
Certified Coding Specialist	14
Patient Care Technician	14
Certified Internal Auditor	12
Certified Public Accountant	12
Registered Respiratory Therapist	12
Pesticide Applicator License	11
Certified Professional Medical Auditor	11
Certified Registered Nurse Anesthetist (CRNA)	11
Master Of Public Administration	11
Certified Master Trainer	11
Board Certified Oncology Pharmacist (BCOP)	10
Coder Certification	10
Licensed Clinical Social Worker (LCSW)	10

Appendix A - Data Sources and Calculations

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Industrial Relations; Florida Department of Economic Opportunity; Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit; Illinois Department of Employment Security, Employment Projections; Indiana Department of Workforce Development; Kentucky Office of Employment and Training; Ohio Department of Job and Family Services, Labor Market Information Division; Tennessee Department of Labor and Workforce Development, Research and Statistics Division

Epidemiologists in 8 States

Epidemiologists (SOC 19-1041):

Investigate and describe the determinants and distribution of disease, disability, or health outcomes. May develop the means for prevention and control.

Sample of Reported Job Titles:

Epidemiologist
Environmental Epidemiologist
Infection Control Practitioner (ICP)
Epidemiology Investigator
Communicable Disease Specialist
State Epidemiologist
Research Epidemiologist
Public Health Epidemiologist
Nurse Epidemiologist
Chronic Disease Epidemiologist

Related O*NET Occupation:

Epidemiologists (19-1041.00)

Contents

What is Emsi Data?	1
Report Parameters	2
Executive Summary	3
Jobs	4
Compensation	6
Job Posting Activity	7
Demographics	9
Occupational Programs	10

What is Emsi Data?

Emsi data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumés, and job postings to give you a complete view of the workforce.

Emsi data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.



Report Parameters

1 Occupation

19-1041 Epidemiologists

8 States

1 Alabama

12 Florida

13 Georgia

17 Illinois

18 Indiana

21 Kentucky

39 Ohio

47 Tennessee

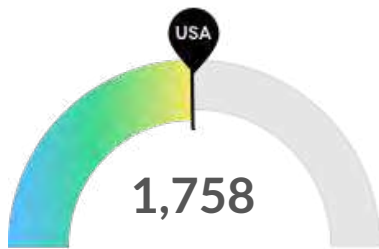
Class of Worker

QCEW Employees

The information in this report pertains to the chosen occupation and geographical areas.

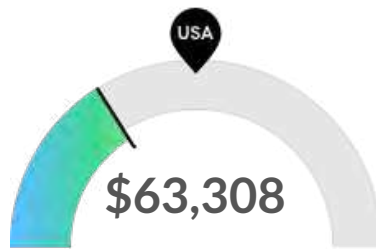
Executive Summary

Light Job Posting Demand Over an Average Supply of Regional Jobs



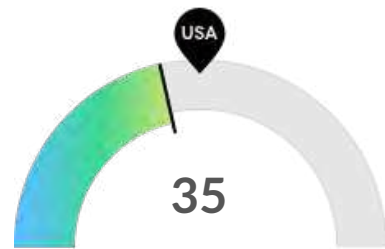
Jobs (2017)

Your area is about average for this kind of job. The national average for an area this size is 1,778* employees, while there are 1,758 here.



Compensation

Earnings are low in your area. The national median salary for Epidemiologists is \$69,659, compared to \$63,308 here.



Job Posting Demand

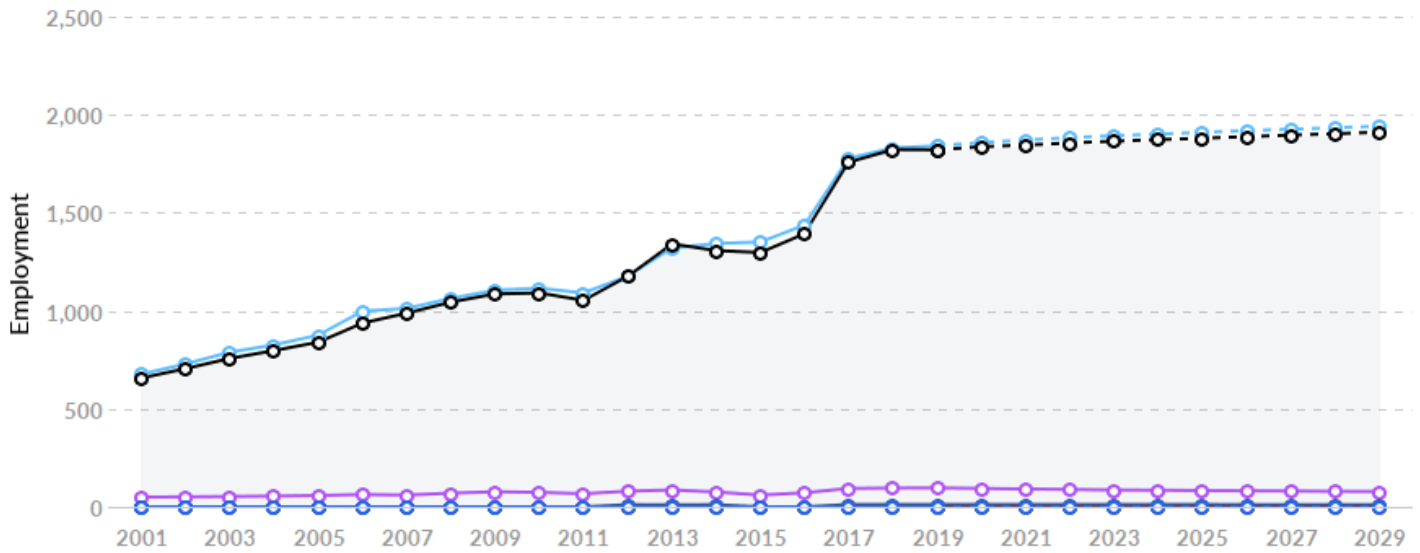
Job posting activity is low in your area. The national average for an area this size is 43* job postings/mo, while there are 35 here.

*National average values are derived by taking the national value for Epidemiologists and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Jobs

Regional Employment Is About Equal to the National Average

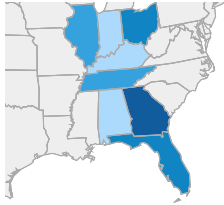
An average area of this size typically has 1,778* jobs, while there are 1,758 here.



Region	2017 Jobs	2027 Jobs	Change	% Change
● 8 States	1,758	1,896	138	7.8%
● National Average	1,778	1,926	148	8.3%
● Elizabethtown-Fort Knox, KY	0	0	0	0.0%
● Louisville/Jefferson County, KY-IN	12	11	0	-1.7%
● Bowling Green, KY	0	0	0	0.0%
● Nashville-Davidson--Murfreesboro--Franklin, TN	94	81	-13	-13.9%

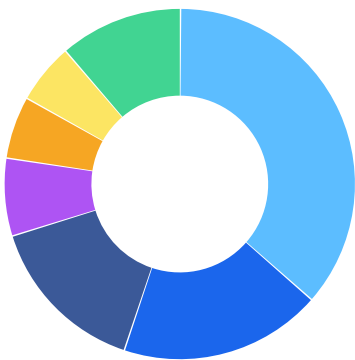
*National average values are derived by taking the national value for Epidemiologists and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Regional Breakdown



State	2017 Jobs
Georgia	411
Ohio	319
Florida	312
Tennessee	228
Illinois	202

Most Jobs are Found in the State Government, Excluding Education and Hospitals Industry Sector

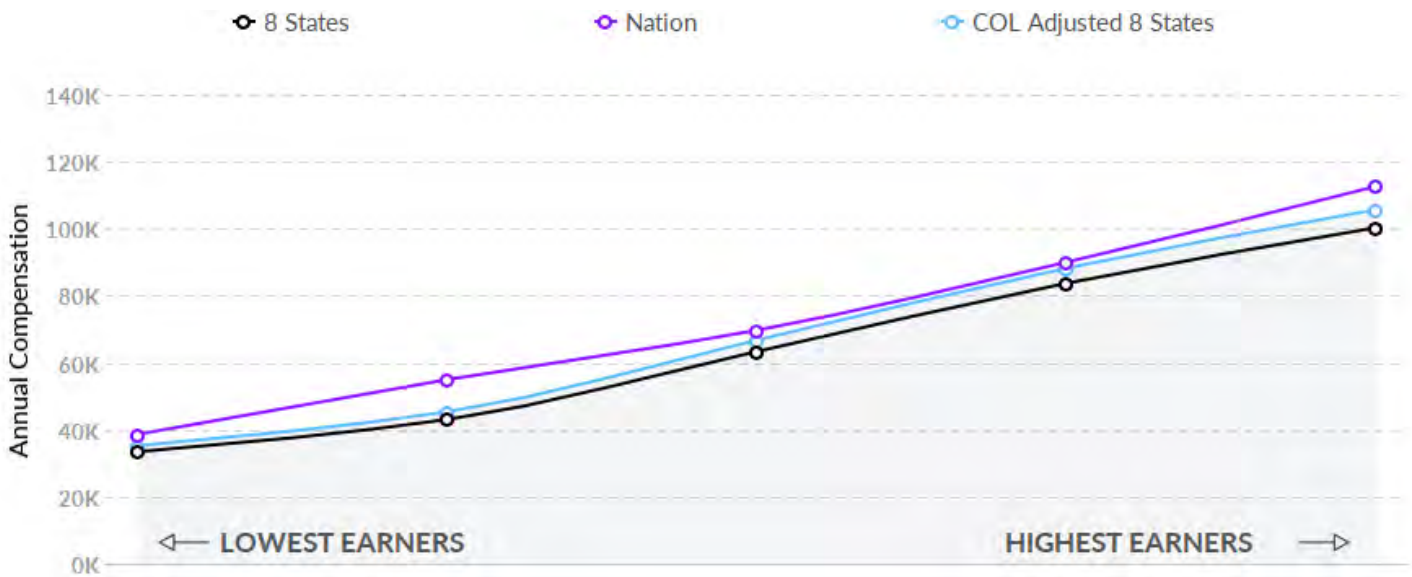


Industry	% of Occupation in Industry (2017)
State Government, Excluding Education and Hospitals	36.4%
Local Government, Excluding Education and Hospitals	18.7%
General Medical and Surgical Hospitals	15.1%
Education and Hospitals (State Government)	7.2%
Colleges, Universities, and Professional Schools	5.8%
Scientific Research and Development Services	5.6%
Other	11.4%

Compensation

Regional Compensation Is 9% Lower Than National Compensation

For Epidemiologists, the 2018 median wage in your area is \$63,308, while the national median wage is \$69,659.



Job Posting Activity



1,374 Unique Job Postings

The number of unique postings for this job from Jan 2017 to Mar 2020.



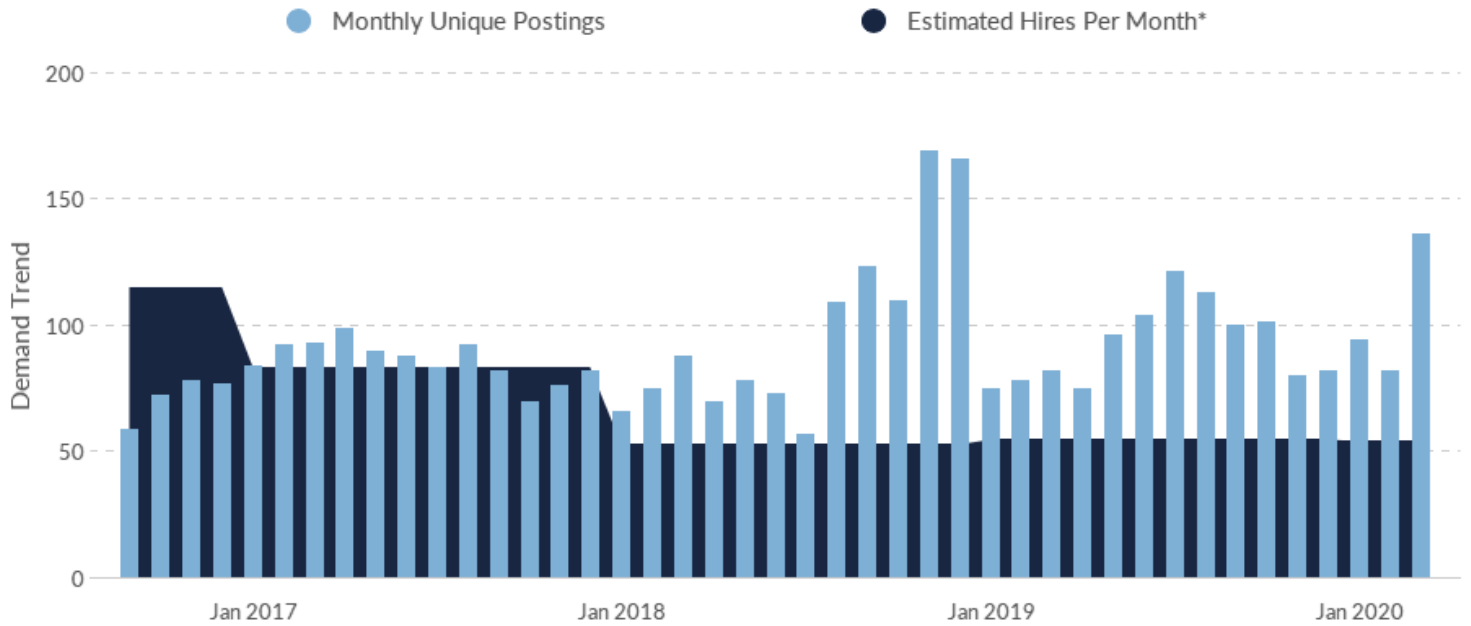
328 Employers Competing

All employers in the region who posted for this job from Jan 2017 to Mar 2020.













31 Day Median Duration








Posting duration is the same as what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2017 - Mar 2020)	Avg Monthly Hires (Jan 2017 - Mar 2020)
Epidemiologists	93	63

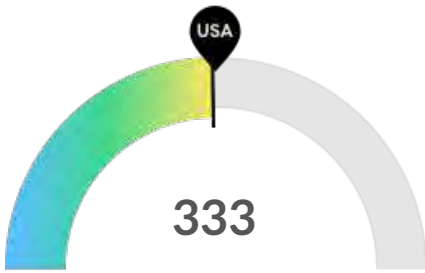
*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Emsi hires are calculated using a combination of Emsi jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
Anthem, Inc.	106 
State of Georgia	59 
Emory University	41 
United States Department of De...	35 
The Centers Inc	33 
Dph Inc	32 
University of Kentucky	27 
Leidos Holdings, Inc.	25 
Tennessee Department of Trans...	23 
Indiana State University	21 

Top Job Titles	Unique Postings
Epidemiologists	432 
Research Scientists	75 
Research Investigators	47 
Public Health Analysts	44 
Project Researchers	42 
Postdoctoral Research Fellows	41 
Registered Nurses	39 
Research Associates (Life, Physi...	20 
Assistant Professors	19 
Environmental Specialists (Life, ...	17 

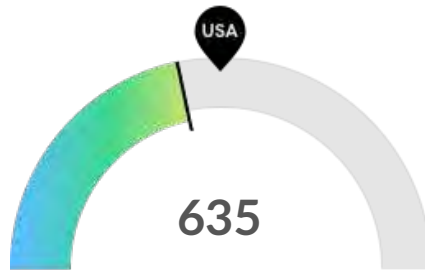
Demographics

Retirement Risk Is About Average, While Overall Diversity Is About Average



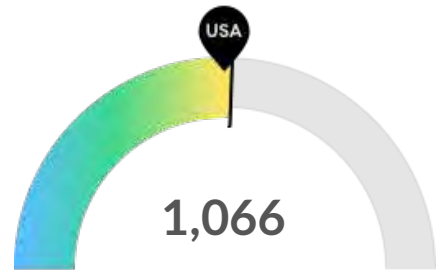
Retiring Soon

Retirement risk is about average in your area. The national average for an area this size is 338* employees 55 or older, while there are 333 here.



Racial Diversity

Racial diversity is low in your area. The national average for an area this size is 775* racially diverse employees, while there are 635 here.



Gender Diversity

Gender diversity is about average in your area. The national average for an area this size is 1,031* female employees, while there are 1,066 here.

*National average values are derived by taking the national value for Epidemiologists and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown

Occupation Race/Ethnicity Breakdown

Occupation Gender Breakdown

National Educational Attainment

Occupational Programs



4 Programs

Of the programs that can train for this job, 4 have produced completions in the last 5 years.



888 Completions (2018)

The completions from all regional institutions for all degree types.



173 Openings (2018)

The average number of openings for an occupation in the region is 5,739.

CIP Code	Top Programs	Completions (2018)
26.1309	Epidemiology	437
51.2202	Environmental Health	225
51.1401	Medical Scientist	160
26.0401	Cell/Cellular Biology and Histology	66

Top Schools	Completions (2018)
Emory University	196
University of Miami	140
University of Georgia	65
University of Cincinnati-Main Campus	62
Benedictine University	56
Fort Valley State University	34
Columbus State Community College	26
Vanderbilt University	25
Case Western Reserve University	24
University of Alabama at Birmingham	23

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

Cost of Living Data

Emsi cost of living data is based on the Cost of Living Index published quarterly by the Council for Community and Economic Research (C2ER).

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Epidemiologists in the United States

Epidemiologists (SOC 19-1041):

Investigate and describe the determinants and distribution of disease, disability, or health outcomes. May develop the means for prevention and control.

Sample of Reported Job Titles:

Epidemiologist
Environmental Epidemiologist
Infection Control Practitioner (ICP)
Epidemiology Investigator
Communicable Disease Specialist
State Epidemiologist
Research Epidemiologist
Public Health Epidemiologist
Nurse Epidemiologist
Chronic Disease Epidemiologist

Related O*NET Occupation:

Epidemiologists (19-1041.00)

Contents

What is Emsi Data?	1
Report Parameters	2
Executive Summary	3
Jobs	4
Compensation	6
Job Posting Activity	7
Demographics	9
Occupational Programs	11

What is Emsi Data?

Emsi data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumés, and job postings to give you a complete view of the workforce.

Emsi data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.



Report Parameters

1 Occupation

19-1041 Epidemiologists

1 Nation

0 United States

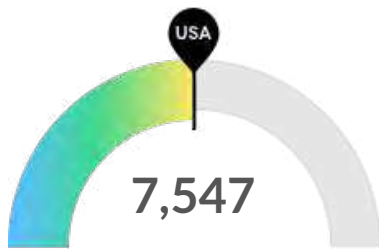
Class of Worker

QCEW Employees

The information in this report pertains to the chosen occupation and geographical area.

Executive Summary

Average Job Posting Demand Over an Average Supply of Regional Jobs



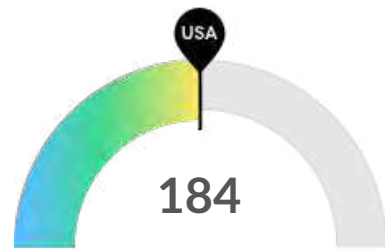
Jobs (2017)

United States is about average for this kind of job. The national average for an area this size is 7,547* employees, while there are 7,547 here.



Compensation

Earnings are about average in United States. The national median salary for Epidemiologists is \$69,659, compared to \$69,659 here.



Job Posting Demand

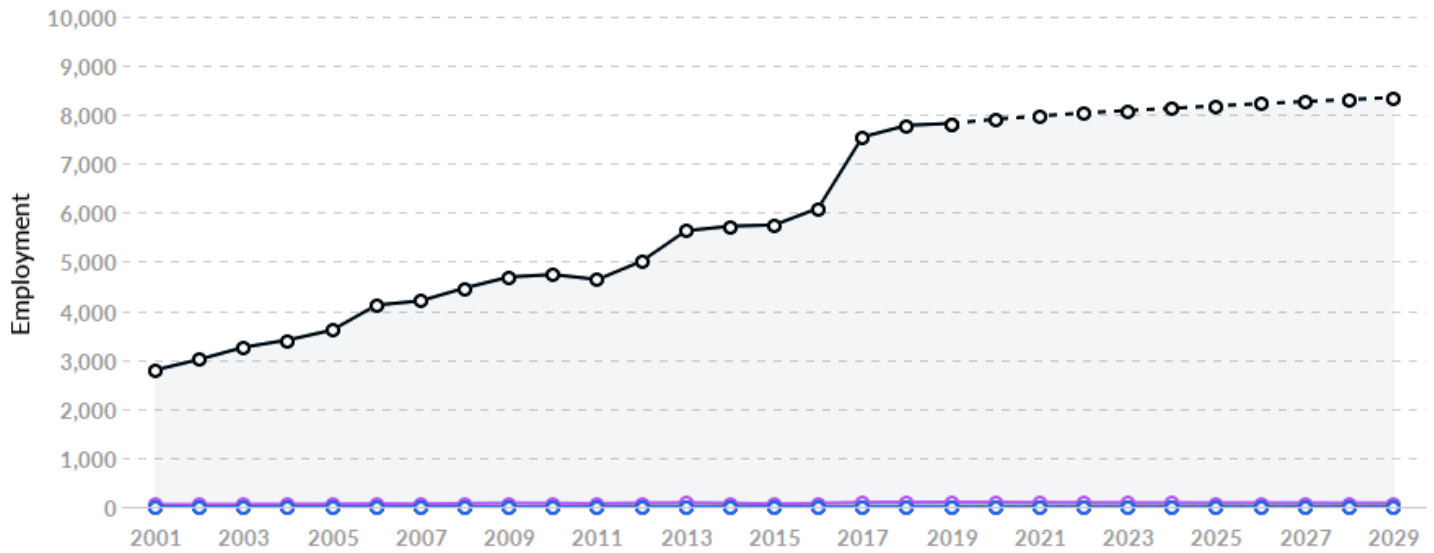
Job posting activity is about average in United States. The national average for an area this size is 184* job postings/mo, while there are 184 here.

*National average values are derived by taking the national value for Epidemiologists and scaling it down to account for the difference in overall workforce size between the nation and United States. In other words, the values represent the national average adjusted for region size.

Jobs

Regional Employment Is About Equal to the National Average

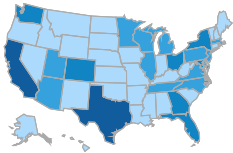
An average area of this size typically has 7,547* jobs, while there are 7,547 here.



Region	2017 Jobs	2027 Jobs	Change	% Change
● United States	7,547	8,268	722	9.6%
● National Average	7,547	8,268	722	9.6%
● Elizabethtown-Fort Knox, KY	0	0	0	0.0%
● Louisville/Jefferson County, KY-IN	12	11	0	-1.7%
● Bowling Green, KY	0	0	0	0.0%
● Nashville-Davidson--Murfreesboro--Franklin, TN	94	81	-13	-13.9%

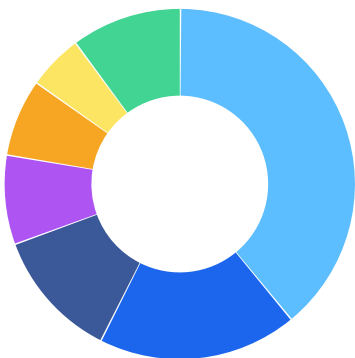
*National average values are derived by taking the national value for Epidemiologists and scaling it down to account for the difference in overall workforce size between the nation and United States. In other words, the values represent the national average adjusted for region size.

Regional Breakdown



State	2017 Jobs
California	744
Texas	716
Georgia	411
Washington	368
Colorado	348

Most Jobs are Found in the State Government, Excluding Education and Hospitals Industry Sector

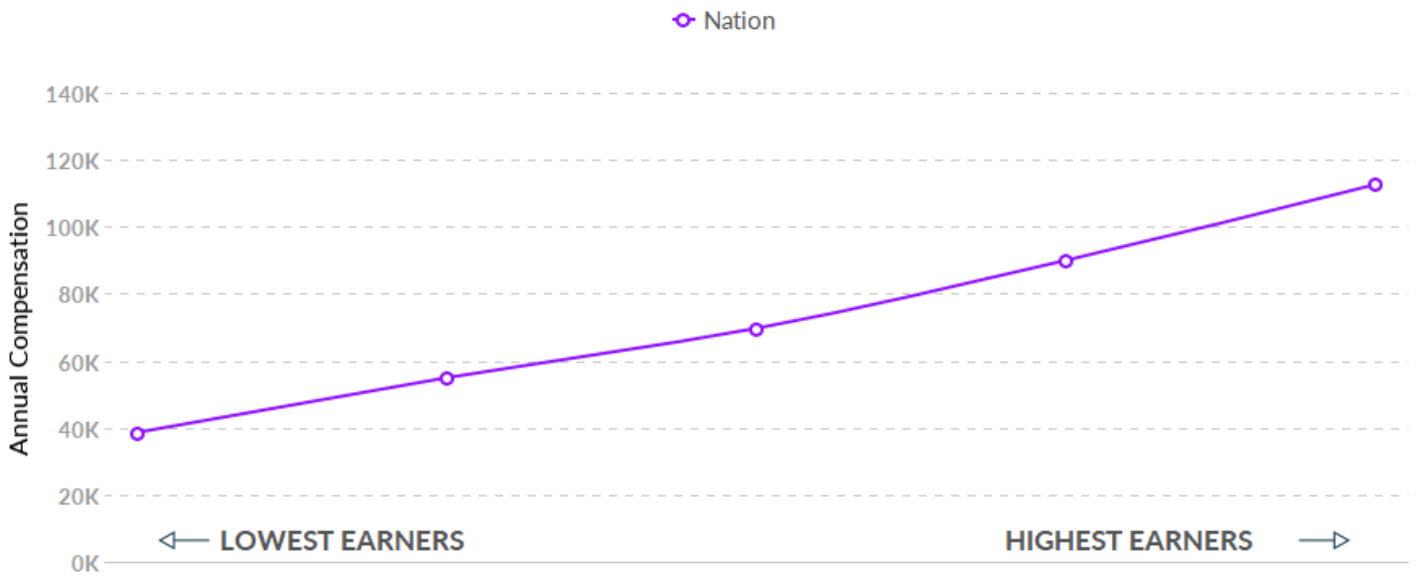


Industry	% of Occupation in Industry (2017)
State Government, Excluding Education and Hospitals	39.0%
Local Government, Excluding Education and Hospitals	18.4%
General Medical and Surgical Hospitals	12.0%
Scientific Research and Development Services	8.2%
Education and Hospitals (State Government)	7.1%
Colleges, Universities, and Professional Schools	5.1%
Other	10.2%

Compensation

Regional Compensation Is the Same Cost as the Nation

In 2018, the median compensation for Epidemiologists in the United States is \$69,659.



Job Posting Activity



7,187 Unique Job Postings

The number of unique postings for this job from Jan 2017 to Mar 2020.



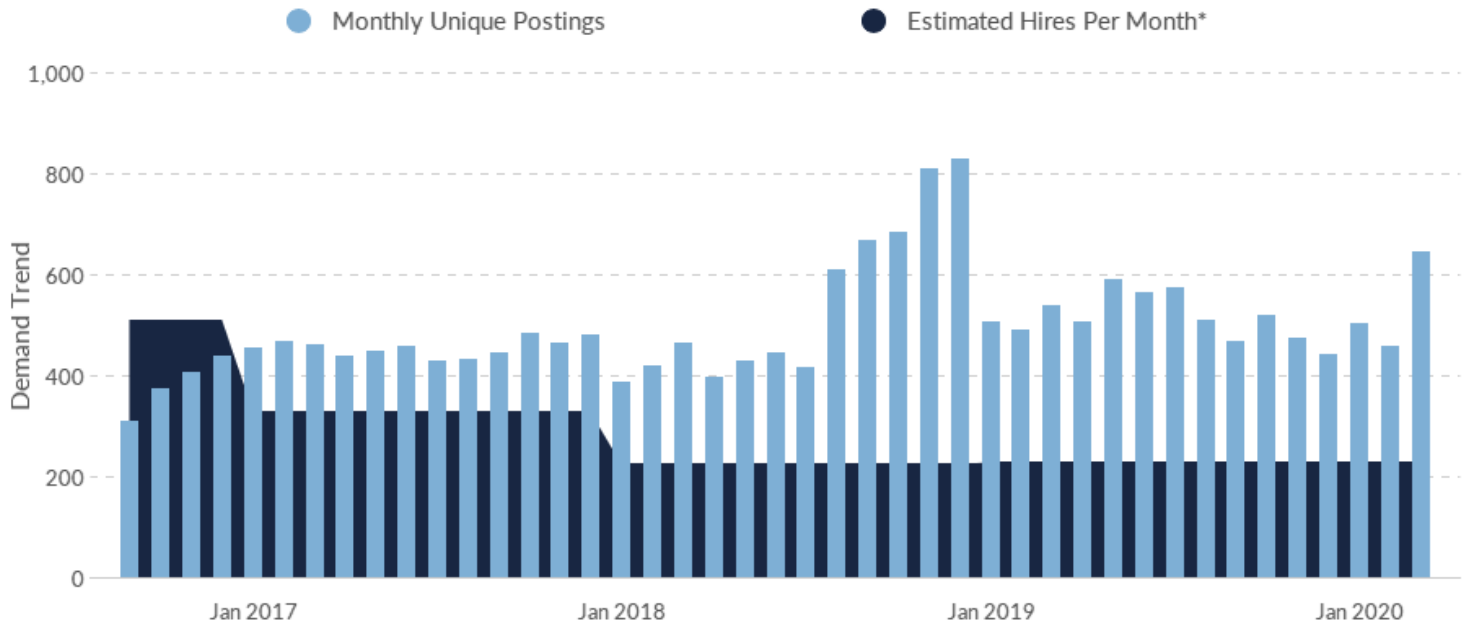
1,550 Employers Competing

All employers in the region who posted for this job from Jan 2017 to Mar 2020.












32 Day Median Duration









Posting duration is 1 day longer than what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2017 - Mar 2020)	Avg Monthly Hires (Jan 2017 - Mar 2020)
Epidemiologists	508	258

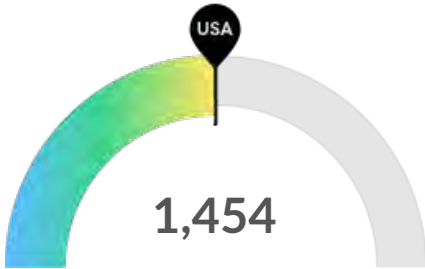
*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Emsi hires are calculated using a combination of Emsi jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
Anthem, Inc.	506 
Texas Department of State Heal...	157 
State of Maryland	97 
General Dynamics Corporation	93 
UnitedHealth Group Incorporate...	87 
State of Washington	86 
Cherokee Nation Businesses LLC	80 
Leidos Holdings, Inc.	69 
Harvard University	65 
IQVIA	65 

Top Job Titles	Unique Postings
Epidemiologists	2,456 
Research Scientists	404 
Public Health Analysts	312 
Project Researchers	186 
Research Investigators	147 
Postdoctoral Research Fellows	136 
Registered Nurses	122 
Research Analysts (Life, Physica...	113 
Staff Nurses	86 
Research Associates (Life, Physi...	76 

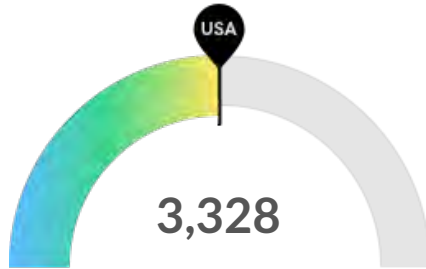
Demographics

Retirement Risk Is About Average, While Overall Diversity Is About Average



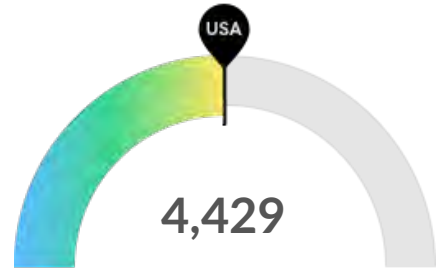
Retiring Soon

Retirement risk is about average in the United States. The national average for an area this size is 1,454* employees 55 or older, while there are 1,454 here.



Racial Diversity

Racial diversity is about average in the United States. The national average for an area this size is 3,328* racially diverse employees, while there are 3,328 here.

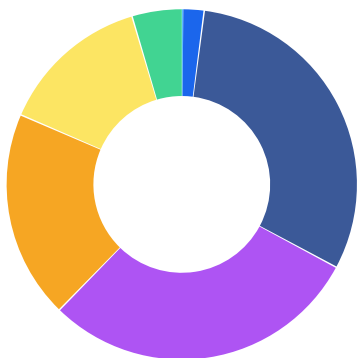


Gender Diversity

Gender diversity is about average in the United States. The national average for an area this size is 4,429* female employees, while there are 4,429 here.

*National average values are derived by taking the national value for Epidemiologists and scaling it down to account for the difference in overall workforce size between the nation and the United States. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown



	% of Jobs	Jobs
14-18	0.0%	0
19-24	2.0%	155
25-34	30.8%	2,408
35-44	29.5%	2,305
45-54	19.2%	1,501
55-64	13.9%	1,089
65+	4.7%	364

Occupation Race/Ethnicity Breakdown

Occupation Gender Breakdown

National Educational Attainment

Occupational Programs



4 Programs

Of the programs that can train for this job, 4 have produced completions in the last 5 years.



4,519 Completions (2018)

The completions from all regional institutions for all degree types.



760 Openings (2018)

The average number of openings for an occupation in the region is 24,134.

CIP Code	Top Programs	Completions (2018)
26.1309	Epidemiology	2,002
51.2202	Environmental Health	1,204
51.1401	Medical Scientist	738
26.0401	Cell/Cellular Biology and Histology	575

Top Schools	Completions (2018)
Columbia University in the City of New York	277
Johns Hopkins University	238
Emory University	196
University of Minnesota-Twin Cities	186
Boston University	164
Rutgers University-New Brunswick	164
The University of Texas Health Science Center at Houston	155
University of Miami	140
University of Michigan-Ann Arbor	125
Harvard University	123

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

Cost of Living Data

Emsi cost of living data is based on the Cost of Living Index published quarterly by the Council for Community and Economic Research (C2ER).

Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

From: [Gardner, Marilyn](#)
To: [Stevens, Cheryl](#)
Cc: [Basta, Tania](#); [Plemons, Rheanna](#)
Subject: FW: Letter of Support
Date: Wednesday, May 6, 2020 1:18:35 AM

Provost Stevens,

Below please find a solicited statement of support for the proposed graduate epidemiology certificate from Dr. Douglas Thurman, the acting State Epidemiologist for Kentucky. I respectfully request that this be added to the additional information I submitted last Friday. Thank you for your consideration.

Marilyn

From: Thoroughman, Douglas (CHS-PH) <douglas.thoroughman@ky.gov>
Sent: Tuesday, May 5, 2020 11:15 PM
To: Gardner, Marilyn <marilyn.gardner@wku.edu>; Robeson, Sara (CHS-PH) <Sara.Robeson@ky.gov>
Subject: Letter of Support

**** This message originated from outside WKU. Always use caution following links. ****

Dear Marilyn,

As you know, I have been with the Centers for Disease Control and Prevention (CDC) for over 20 years and currently serve as the acting State Epidemiologist for Kentucky at the Kentucky Department for Public Health (KDPH). I wanted to express my dismay at hearing that there may be some doubt at Western Kentucky University as to the need to advance the capability of the university to prepare an epidemiology-trained workforce for Kentucky. The current COVID-19 worldwide pandemic lays bare the stark under-preparedness of our nation for a public health emergency of this magnitude. Epidemiologic capacity is at the center of this response - we could not attempt any effective response today without the trained epidemiologists that we have gathered from multiple programs at KDPH as well as universities and other volunteer groups. But that is not approaching the need we currently have to address this situation. Epidemiology is the core science of public health and without this science and the epidemiologists who practice it, we are not able to gather and appropriately analyze the morbidity and mortality data, risk information, response strategy effectiveness or predict what is coming next, in order to adequately inform public health response. In this particular event, the information that KDPH gathers from laboratories, hospitals, private providers, regional epidemiologists and local health departments is aggregated, sorted, cleaned, analyzed and presented by epidemiologists in integrated materials to the Governor daily. He takes action and makes vital decisions based on this information - decisions that are evoking societal changes, at least in the short term. Without the training and epidemiological background that professors like you provide within the context of universities like WKU, we would be unable to mount responses such as we have for COVID-19, let alone provide

protection to Kentuckians on a daily basis through surveillance, investigation and intervention for all diseases, chronic illnesses and other health conditions. The need for more epidemiologic training and training programs across the country, and particularly in areas like western Kentucky, where there are no other close-by university resources for this kind of training, is more evident now than ever before.

Your past work with our programs, Dr. Gardner, have yielded such fruit, with several WKU students contributing to Kentucky Department for Public Health response trainings, exercises, community surveys and even emergency responses. Of special note, one of your graduates, Linwood Strennecky, has been serving a vital role in assisting with data management and analysis for our COVID-19 response. It is through his training at WKU and your partnership with KDPH, where Linwood did a practicum placement, that he ended up with a career at KDPH, where he has served for several years now in a variety of epidemiologic and public health preparedness functions.

I hope that the administration of Western Kentucky University will see its way clear to support your proposed Epidemiology Certificate Program. You have my full support, especially in light of how effective you have been in the past and what a great public health partner WKU has been to KDPH. All my best wishes for success in this endeavor.

Your colleague,
Doug

Doug Thoroughman, PhD, MS
State Epidemiologist (Acting)
CDC Career Epidemiology Field Officer
Kentucky Department for Public Health
275 E. Main St., HS 2GW-C
Frankfort, KY 40621
Phone: 502-564-3418 x4315
Fax: 502-564-9626

NOTICE OF CONFIDENTIALITY: This e-mail, including any attachments, is intended only for the use of the individual or entity to which it is addressed and may contain confidential information that is legally privileged and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, you are notified that any review, use, disclosure, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please contact the sender by reply e-mail and destroy all copies of the original message.

Keyword Stats 2020-04-28 at 15_19_33

April 1, 2019 - March 31, 2020

Keyword	Currency	Avg. monthly searches	Competition
epidemiology degree	USD	1000	Medium
masters in epidemiology	USD	1300	High
mph epidemiology	USD	720	High
epidemiology masters programs	USD	390	High
masters in epidemiology online	USD	590	High
online epidemiology programs	USD	140	High
mph epidemiology online	USD	260	High
masters in public health epidemiology	USD	260	High
online masters in epidemiology and biostatistics	USD	70	High
online epidemiology masters programs	USD	90	High
master of science in epidemiology	USD	90	Medium
online epidemiology course	USD	170	High
master's degree in epidemiology	USD	140	High
epidemiology degree online	USD	210	High
masters in epidemiology and biostatistics	USD	20	High
master of clinical epidemiology	USD	20	Medium
mph epidemiology programs	USD	90	High
epidemiology degree programs	USD	70	High
online masters in epidemiology no gre	USD	40	High
online epidemiology certificate	USD	170	High
master of applied epidemiology	USD	10	Low
epidemiology and biostatistics masters	USD	10	High
best epidemiology masters programs	USD	40	Medium
best mph epidemiology programs	USD	30	Medium
online mph epidemiology programs	USD	40	High
masters in clinical epidemiology online	USD	10	Low
online mph epidemiology no gre	USD	40	High
masters in public health and epidemiology	USD	10	High
epidemiology grad school	USD	40	Medium
mph epidemiology and biostatistics	USD	10	High
mph epidemiology reddit	USD	20	Low
master of science in clinical epidemiology	USD	10	Medium
mph phd epidemiology	USD	20	Low
master of science in epidemiology and biostatistics	USD	10	Medium
nutritional epidemiology masters	USD	10	Unknown
masters in public health epidemiology online	USD	30	High
social epidemiology masters	USD	10	Medium
masters in epidemiology and public health	USD	10	High
mph field epidemiology	USD	10	Medium
masters in epidemiology distance learning	USD	10	Unknown
md phd epidemiology programs	USD	10	Low
mph in epidemiology and biostatistics	USD	10	Medium

Competition (indexed value)	Top of page bid (low range)	Top of page bid (high range)
50	3.32	14.3
75	5.21	27.31
71	5.96	21.03
81	7.17	27.72
92	11.27	34.99
98	12.47	33.85
92	12.27	38.16
86	9.81	33.87
98	9.82	30
95	14.18	38.5
40	4.83	26.01
87	5.03	19.84
78	7.2	26.01
92	11.22	30
77	5.35	25.5
64	3.18	14.93
86	8.74	26.01
82	5.09	33.84
93	12.03	35.64
86	4.54	18.86
29		
84	4.62	15
39	5.87	18.46
48	7.82	20.07
85	12.24	43.02
0		
97	11.21	40.91
100	10.11	39.6
35	4.1	13.2
86	6.05	13.45
10		
33	4.46	15
27		
48		
96	17.82	50.85
64		
92	10.27	43.6
57		
21		
51	5.82	19.49

Ad impression share Organic impression share Organic average position In account? In plan?

Y

Searches: Apr 2019	Searches: May 2019	Searches: Jun 2019	Searches: Jul 2019	Searches: Aug 2019
880	880	720	720	720
1000	1000	880	880	1000
720	720	590	590	590
320	320	260	260	320
390	590	390	480	590
110	170	90	110	140
170	210	210	260	210
260	260	170	210	210
50	70	50	50	50
70	110	90	70	30
70	90	50	70	90
210	170	170	140	170
140	170	110	140	110
110	140	140	140	170
10	20	10	20	20
20	20	20	30	20
70	90	70	70	70
70	50	50	70	70
40	50	40	30	70
140	170	140	110	90
10	10	10	10	10
10	10	10	10	10
30	20	10	20	20
20	30	20	10	30
20	40	40	20	10
20	10	10	10	10
10	10	20	30	30
10	10	10	10	10
20	20	10	10	30
10	10	10	10	20
30	20	20	20	20
10	10	10	20	10
20	20	10	20	20
10	10	10	10	0
10	10	10	10	10
40	40	20	30	20
0	10	10	10	10
10	10	10	10	10
0	10	10	0	10
0	10	0	0	0
10	10	10	10	10
10	10	10	20	10

Searches: Sep 2019	Searches: Oct 2019	Searches: Nov 2019	Searches: Dec 2019	Searches: Jan 2020
720	720	590	590	1000
1000	1000	880	720	1300
590	590	590	590	720
390	390	320	390	720
390	480	480	480	590
140	140	110	140	210
170	260	260	320	320
210	260	210	210	320
50	70	50	40	70
40	70	50	70	70
70	70	50	70	90
140	170	140	110	170
140	110	110	110	170
140	170	170	140	210
10	10	10	20	20
20	30	30	20	30
70	90	90	70	110
50	50	40	40	90
40	50	30	20	20
140	90	140	140	210
0	10	10	0	0
10	10	10	20	20
40	30	20	40	50
10	20	30	20	30
20	30	40	40	40
10	10	10	10	10
40	50	20	40	50
20	10	10	10	10
50	40	30	20	50
10	10	10	10	10
10	30	20	30	30
10	20	10	10	10
10	10	10	20	20
10	10	0	10	10
10	10	10	10	10
40	30	20	10	40
0	10	10	0	0
10	10	0	10	10
0	10	10	0	0
0	0	0	0	10
10	20	20	10	10
10	10	10	10	10

Searches: Feb 2020	Searches: Mar 2020
1000	3600
1300	2900
720	1300
590	880
590	1000
170	260
320	720
260	480
70	110
70	260
90	170
140	480
170	320
260	720
20	20
20	30
110	170
40	140
30	70
170	390
10	10
20	10
70	90
30	40
50	50
10	10
70	90
10	10
70	90
10	20
20	20
10	10
10	20
10	10
10	0
30	70
10	10
10	10
0	10
0	0
10	10
10	10

**ACCREDITED FINANCIAL COUNSELOR
UNDERGRADUATE CERTIFICATE**

REQUEST: Approval of an Undergraduate Certificate in Accredited Financial Counselor offered through the Gordon Ford College of Business.

FACTS: WKU's Accredited Financial Counselor certificate program is designed to fulfill the educational requirements of the Accredited Financial Counselor® certification, awarded following passage of a separate test by the AFCPE. The program prepares individuals to: (1) educate clients in sound financial principles; (2) assist clients in the process of overcoming their financial indebtedness; (3) help clients identify and modify ineffective money management behaviors; (4) guide clients in developing successful strategies for achieving their financial goals; (5) support clients as they work through their financial challenges and opportunities; and (6) help clients develop new perspectives on the dynamics of money in relation to family, friends and individual self-esteem. The AFC® certification also requires 1,000 hours of relevant financial counseling experience, three letters of reference, and adherence to a code of ethics.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: The Department of Finance received, from the Provost, funding for an additional professor, who has been hired starting Fall 2020, with the goal of expanding the number of offerings in, and enrollment in, personal financial planning courses. No further budgetary implications of a significant nature are known. Implementation is Fall 2020.

RECOMMENDATION: President Timothy C. Caboni recommends approval of an Undergraduate Certificate in Accredited Financial Counselor with implementation Fall 2020.

MOTION: Approval to establish an Undergraduate Certificate in Accredited Financial Counselor effective Fall 2020.

**Gordon Ford College of Business
Department of Finance
Proposal to Create a New Certificate Program (Action Item)**

Contact Person: Dr. Ron A. Rhoades, Director, Personal Financial Planning Program
Ron.Rhoades@wku.edu; 352-228-1672

1. Identification of program:

1.1. **Program title:** Accredited Financial Counselor

1.2. **Required hours in program:** 9

1.3. **Special information:** Intended to lead to the Accredited Financial Counselor® certification, which leads to the ability to counsel individuals on budgeting, proper use of credit, various aspects of insurance, basic aspects of taxation, and making good financial decisions. The AFC® certificate, per the AFCPE (which awards the certificate), normally requires two courses, but our curriculum requires three.

1.4. **Catalog description:** WKU's Accredited Financial Counselor certificate program is designed to fulfill the educational requirements of the Accredited Financial Counselor® certification, awarded following passage of a separate test by the AFCPE. The program prepares individuals to: (1) educate clients in sound financial principles; (2) assist clients in the process of overcoming their financial indebtedness; (3) help clients identify and modify ineffective money management behaviors; (4) guide clients in developing successful strategies for achieving their financial goals; (5) support clients as they work through their financial challenges and opportunities; and (6) help clients develop new perspectives on the dynamics of money in relation to family, friends and individual self-esteem. The AFC® certification also requires 1,000 hours of relevant financial counseling experience, three letters of reference, and adherence to a code of ethics.

1.5. **Classification of Instructional Program Code (CIP):** 52.0804 - Financial Planning and Services

2. Learning outcomes of the proposed certificate program:

- Demonstrate a fundamental understanding of personal financial statements and financial ratios
- Demonstrate a fundamental understanding of privacy regulations and investor consumer protection laws
- Demonstrate a fundamental understanding of credit card debt, consumer protections relating to credit, credit scores, and credit reporting
- Demonstrate a fundamental understanding of the various forms and characteristics of vehicle insurance, homeowners' insurance, and life insurance

3. Rationale:

3.1 Reason for developing the proposed certificate program:

Financial literacy educational requirements in high schools are driving the need for financial counseling certification by teachers. Social workers, psychologists, and sociologists also deal with the emotional and financial consequences of poor decision-making. The purpose of the Accredited Financial Counselor certificate program is to provide students in education, psychology, social work, sociology, and related majors with the foundational instruction to address with clients the practical and emotional consequences of personal financial decisions

- 3.2. **Relationship of the proposed certificate program to other programs now offered by the department:** The Department of Finance offers a robust B.S. Finance (Financial Planning track) program, consisting of many more required courses (including courses within the business core, three courses in business finance, three investments courses, and six other financial planning-specific courses). The degree is designed to make graduates eligible to sit for the Certified Financial Planner™ exam. Becoming a CFP® also requires 2-3 years of experience in financial services. The Department of Finance also offers a Personal Financial Planning certificate program, which with a concurrently submitted proposal requires 7 courses. The degree is designed to make graduates eligible to sit for the Certified Financial Planner™ exam. Becoming a CFP® also requires 2-3 years of experience in financial services. The Accredited Financial Counselor program's coverage is not as broad nor as deep as the other programs. It is designed to address the basic financial planning needs of most Americans – budgeting, savings rates, management of debt, proper use of credit, ensuring appropriate homeowner's and vehicle and life insurance, making appropriate major financial purchasing decisions, consumer rights, and the very basics of investments.
- 3.3. **Relationship of the proposed certificate program to certificate programs offered in other departments:** N/A
- 3.4. **Projected enrollment in the proposed certificate program:** 5-10 students in the first year; up to 20 per year, in subsequent years
- 3.5. **Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):** Similar programs are offered at these leading colleges which also offer personal financial planning programs: University of Georgia, University of Alabama, Texas Tech University, and Utah Valley State.

A full list is currently approved education programs is available at <https://www.afcpe.org/certification-and-training/become-an-approved-educationprogram/>.

- 3.6. **Relationship of the proposed certificate program to the university mission and objectives:** Proper planning for the attainment of lifetime financial goals can lead to greater happiness and fulfillment in life. In this regard, part of WKU's mission is to: "Enrich the quality of life for those within its reach." Among the components of the WKU strategic plan is the goal of fostering a "Personal and Professional Development Plan, provide common intellectual experiences and high impact practices to develop hard and soft skills as well as to cultivate good, productive citizens." This Certificate will empower students with skills to manage their own finances, as well as to influence others in their communities.

4. **Curriculum:**
 FIN 161 Personal Finance
 FIN 333 Advanced Topics in PFP
 FIN 350 Risk Management and Insurance

TOPICS COVERED IN THE ABOVE COURSES INCLUDE, BUT ARE NOT LIMITED TO:
 (Percentages below are in relation to the AFC® exam, not the course content.)

1. Set the Stage and Gather Client Information (10%)
 - Establish the counseling environment
 - Gather client information
 - Form a strategic counseling plan

2. Assist a Client in Creating an Action Plan (12%)
 - Assist a client in establishing goals
 - Assist a client in identifying strategies to attain goals
3. Develop Financial Statements, Ratios and Spending Plans (10%)
 - Educate a client about a cash flow statement
 - Educate a client about a net worth statement
 - Educate a client about personal financial ratios
 - Educate a client about spending plans
4. Manage Money (15%)
 - Educate a client about financial services
 - Familiarize a client with basic tax management
 - Discuss employment considerations with a client
5. Manage Credit and Debt (15%)
 - Educate a client about uses of credit
 - Educate a client about credit reports and scores
 - Educate a client about credit products
 - Educate a client about debt management
6. Educate a Client about Consumer Protection (6%)
 - Educate a client about consumer rights and responsibilities
 - Educate a client about identity theft
 - Educate a client about investor protection
7. Educate a Client about Major Acquisitions (7%)
 - Acquire property
 - Educate a client about renting a home
 - Educate a client about purchasing a home
 - Educate a client about selling a home
8. Manage Financial Risks (9%)
 - Educate a client about financial risk
 - Educate a client about insurance products
9. Discuss Investment Basics with a Client (8%)
 - Educate a client about investment fundamentals
 - Educate a client about investment choices
10. Educate a Client about the Financial Aspects of Retirement and Estate Planning (8%)
 - Educate a client about retirement planning
 - Educate a client about estate planning

5. Budget implications: The Department of Finance has already received, from the Provost, funding for an additional professor, who has been hired starting Fall 2020, with the goal of expanding the number of offerings in, and enrollment in, personal financial planning courses. No further budgetary implications of a significant nature are known.

6. Proposed term for implementation: Fall 2020

7. Prior committee approvals:

Committee	Approval Dates
Department of Finance	01/22/2020
GFCB Curriculum Committee	02/5/2020
Undergraduate Curriculum Committee	02/25/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

The WKU Board of Regents Academic Affairs Committee has requested additional market analysis information regarding your proposed certificate program. The deadline for the Office of the Provost to receive your follow-up information is **May 1 at 4:30 p.m.** If the follow-up information is not received by the deadline, the program will not be considered by the Board.

Gray Associates provides data on CIP codes and their relationship to student demand, competitive intensity, and employment within a state and national market. Review the data associated with the CIP code selected for the proposed certificate program from your department. Then, address the questions that follow.

SERVICE REGION DATA

Student Demand (89 Percentile) 5

Category	Percentile	Criterion	Value	Score
Size	94	Inquiry Volume (12 Months)	3	3
	0	Int'l Page Views (12 Months)	0	NS
	68	Google* Search Volume (3 Months)	329	0
	0	Completion Volume	0	0
Growth	97	Inquiry Volume YoY Change (Units)	3	1
	56	Google* Search YoY Change (Units)	17	0
	94	Completion Volume YoY Change (Units)	0	1
	0	Inquiry Volume YoY Change (%)	NA	NS
	43	Google* Search YoY Change (%)	5%	0
	0	Completion Volume YoY Change (%)	NA	NS

Degree Fit (6 Percentile) -5

Category	Percentile	Criterion	Value	Score
Completions		National Completions by Level	See	-5
Workforce		National Workforce Ed Attainment	Below	0
NHEBI Natl 2 Year	39	Cost Index**	0.90	NS
	75	Student: Faculty Index	1.14	NS

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
Certificate	0%	100%	76%
Associates	0%	0%	0%
Bachelors	100%	0%	11%
Postbaccalaureate Certificate	0%	0%	6%
Masters	0%	0%	6%
Post-masters Certificate	0%	0%	0%
Doctoral	0%	0%	0%
Unknown	0%	0%	0%

Competitive Intensity (9 Percentile) 3

Category	Percentile	Criterion	Value	Score
Volume of Competition	0	Campuses with Graduates**	0	6
	96	Institutions YoY Change (Units)	0	-1
	0	Average Completions/Institution	NA	NS
	0	Median Completions/Institution	NA	NS
	0	Program Size YoY Change (Units)	NA	NS
	0	Program Size YoY Change (%)	NA	NS
	90	Insts. with Program Online**	5	NS
	77	% of Institutions	17%	NS
	82	Online Completions**	30	NS
	69	% of Completions	6%	NS
Market Saturation	0	Completions per 1,000 Pop**	NA	NS
	96	Average Cost per Inquiry**	\$133	-2
	71	Google Search * Cost per Click**	\$10	0
	65	Competition Index**	0.37	0

CIP Description

A program that prepares individuals to plan and manage the financial interests and growth of individuals and institutions. Includes instruction in portfolio management, investment management, estate planning, insurance, tax planning, strategic investing and planning, financial consulting services, and client relations.

Job Postings (Market)

Award Level	Minimum Education Requested
- Unspecified -	10%
High School/Certificate	54%
Associates	37%
Bachelors	65%
Masters	38%
Doctoral	40%

BLS Workforce Edu (Natl)

Award Level	BLS Educational Attainment
No College	8%
Some College	14%
Associates	6%
Bachelors	49%
Masters	19%
Doctoral	4%

Employment* (74 Percentile) 0

Category	Percentile	Criterion	Value	Score
Size	79	Job Postings Total (12 Months)	13	-2
	66	BLS Current Employment	85	-2
	66	BLS Annual Job Openings	9	-1
	81	Share of Generalist Employment	7	0
	81	Share of Generalist Openings	1	0
Growth	32	Job Postings YoY Change (Units)	-0	NS
	60	Job Postings YoY Change (%)	-3%	NS
	20	BLS YoY Change (%)	-11%	-2
	11	BLS 3-Year Historic Growth (CAGR)	-15%	NS
	60	BLS 10-Year Future Growth (CAGR)	1%	NS
Saturation	70	Job Postings per Graduate	1.2	0
	48	BLS Job Openings per Graduate	0.8	-2
Pay and Outcomes	55	10th-Percentile Wages	\$37,558	1
	94	Wages (Age < 30)	\$58,868	4
	92	Wages (Age 30-60)	\$124,742	4
	47	% with Any Graduate Degree	32%	NS
	54	% with Masters	26%	NS
	39	% with Doct/Prof Degree	6%	NS
	35	% Unemployed (Age <30)**	3%	0
	35	% Unemployed (Age 30-60)**	3%	0
	72	% in Direct Prep Jobs	45%	NS
	0	GE Wages - Assoc. & Cert	NA	NS
0	GE Placement Rate - Assoc. & Cert	NA	NS	

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.
 ** - Color scale in reverse.

NA - No data available/not currently tracked. NS - Not Scored in Rubrics (values = 0).
 2-yr - Associates & certificate programs only.

National Data

GRAYASSOCIATES

Scoring Rubric

Program Rank

Scorecard

Prog x Market

Competitors

Data Table

Workplace Requirements

Historical Data

Crosswalks

Data Definitions

CIP: 52.0804 Financial Planning and Services

Market: National

Modality: All

Award Level: Certificate

Current Programs

**Overall Score
(97 Percentile)**

15

Student Demand (96 Percentile)

12

Category	Percentile	Criterion	Value	Score
Size	0	Inquiry Volume (12 Months)	0	0
	0	Int'l Page Views (12 Months)	0	NS
	68	Google* Search Volume (3 Months)	190,807	0
	96	Completion Volume	3,455	10
Growth	92	Inquiry Volume YoY Change (Units)	0	0
	58	Google* Search YoY Change (Units)	8,167	0
	97	Completion Volume YoY Change (Units)	360	2
	0	Inquiry Volume YoY Change (%)	NA	NS
	41	Google* Search YoY Change (%)	5%	0
	58	Completion Volume YoY Change (%)	12%	0

Degree Fit (6 Percentile)

-5

Category	Percentile	Criterion	Value	Score
Completions		National Completions by Level	See	-5
Workforce		National Workforce Ed Attainment	Below	0
NHEBI Natl 2 Year	39	Cost Index**	0.90	NS
	75	Student: Faculty Index	1.14	NS

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
Certificate	0%	77%	76%
Associates	0%	0%	0%
Bachelors	100%	11%	11%
Postbaccalaureate Certificate	0%	6%	6%
Masters	0%	5%	6%
Post-masters Certificate	0%	0%	0%
Doctoral	0%	0%	0%
Unknown	0%	0%	0%

Competitive Intensity (64 Percentile)

4

Category	Percentile	Criterion	Value	Score
Volume of Competition	71	Campuses with Graduates**	9	0
	81	Institutions YoY Change (Units)	1	0
	100	Average Completions/Institution	384	4
	58	Median Completions/Institution	6	0
	68	Program Size YoY Change (Units)	1	0
	88	Program Size YoY Change (%)	1	0
	84	Insts. with Program Online**	1	NS
	70	% of Institutions	11%	NS
	99	Online Completions**	3,402	NS
	98	% of Completions	98%	NS
Market Saturation	95	Completions per 1,000 Pop**	0.05	NS
	0	Average Cost per Inquiry**	NA	NS
	70	Google Search * Cost per Click**	\$12	0
	56	Competition Index**	0.37	0

CIP Description

A program that prepares individuals to plan and manage the financial interests and growth of individuals and institutions. Includes instruction in portfolio management, investment management, estate planning, insurance, tax planning, strategic investing and planning, financial consulting services, and client relations.

Job Postings (Market)

Award Level	Minimum Education Requested	Award Level	BLS Educational Attainment
- Unspecified -	25%	No College	8%
High School/Certificate	32%	Some College	14%
Associates	12%	Associates	6%
Bachelors	47%	Bachelors	49%
Masters	17%	Masters	19%
Doctoral	11%	Doctoral	4%

BLS Workforce Edu (Natl)

Employment* (88 Percentile)

4

Category	Percentile	Criterion	Value	Score
Size	79	Job Postings Total (12 Months)	12,612	-2
	74	BLS Current Employment	42,807	-2
	74	BLS Annual Job Openings	4,265	-1
	81	Share of Generalist Employment	5,326	0
	81	Share of Generalist Openings	505	0
	Growth	6	Job Postings YoY Change (Units)	-166
15		Job Postings YoY Change (%)	-1%	NS
73		BLS YoY Change (%)	6%	0
95		BLS 3-Year Historic Growth (CAGR)	8%	NS
78		BLS 10-Year Future Growth (CAGR)	0	NS
Saturation		66	Job Postings per Graduate	2.8
	61	BLS Job Openings per Graduate	0.9	0
Pay and Outcomes	53	10th-Percentile Wages	\$40,780	1
	94	Wages (Age < 30)	\$58,868	4
	92	Wages (Age 30-60)	\$124,742	4
	47	% with Any Graduate Degree	32%	NS
	54	% with Masters	26%	NS
	39	% with Doct/Prof Degree	6%	NS
	35	% Unemployed (Age <30)**	3%	0
	35	% Unemployed (Age 30-60)**	3%	0
	72	% in Direct Prep Jobs	45%	NS
	0	GE Wages - Assoc. & Cert	NA	NS
0	GE Placement Rate - Assoc. & Cert	NA	NS	

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.
** - Color scale in reverse.

NA - No data available/not currently tracked. NS - Not Scored in Rubrics (values = 0).
2-Yr - Associates & certificate programs only.

<40% 40%+ 70%+ 90%+ 95%+ 98%+ Percentile

Export to PNG

1. If the student demand total is less than 10, describe how you plan to market the program to increase student demand/interest at WKU.

The Department of Finance is sponsoring the program, as the content of the certificate program, including preparation for the AFC® examination, is already included as part of three courses: FIN 161 Personal Finance; FIN 333 Advanced Financial Planning (which covers personal income tax planning; and FIN 350 Risk Management and Insurance.

In addition to taking the courses, to secure the professional certificate an exam must be taken through the AFCPE, a professional organization established in 1984. www.afcpe.org. The total costs of registration and taking the exam, for undergraduate students completing the required course work, is only \$490, a substantial discount from the cost of the educational program for those not taking university classes. Our AFC program, once approved, will be listed as an undergraduate program on the AFCPE web site.

2. If the student demand is greater than 10, describe how you plan to advertise the program's availability to the current student body and/or to prospective students.

The Accredited Financial Counselor certificate is primarily designed to aid students who are already studying education, psychology, sociology, and social work. For example, those involved in social work and psychology often encounter individuals and families who possess stress relating to planning for expenditures, proper use of credit, student loans, and possessing the right amounts and types of insurance as a means of mitigating risks. Educators, especially those in secondary schools, are now required to establish standards for financial literacy and possess a financial literacy requirement for high school graduation.

The primary means of promoting the program will be via faculty and staff in:

- 1) College of Education and Behavioral Sciences / School of Teacher Education;
- 2) College of Education and Behavioral Sciences / Department of Psychology; and
- 3) College of Health and Human Services / Department of Social Work.
- 4) Potter College / Department of Sociology & Criminology
- 5) Ogden College of Science & Engineering / Department of Psychological Sciences

Flyers and brochures will be produced that can be made available in the academic buildings, and/or for handing out to students.

In addition, the AFC certificate program will be promoted on the Gordon Ford College of Business / Department of Finance web site, and via the Finance Department's extensive social media presence.

We are in the process of establishing processes so that students in these other colleges undertake applied internships through the WKU Center for Financial Success. This will enable practice, hands-on financial counseling experience, as well as assist the WKU student body through peer-to-peer counseling. We have also had discussions with the Department of Social Work to engage a student from that department to work as a student financial counselor in a field placement.

3. **If the employment total is less than 5, provide a rationale on how this program can lead to employability of students. Address any partnerships developed to assist finding employment for students with this credential.**

SEE ANSWERS TO #1, ABOVE.

Also, we will seek to connect potential graduates with the certificates to employers serving military families in Ft. Knox, KY and Ft. Campbell, KY.

We know of two graduates of the Certified Financial Planner™ certificate program working as financial counselors – one associated with a firm serving the military, and another possessing her own practice in the Russellville, KY area. We plan to reach out to these graduates to assist students in the program in understanding the opportunities in the financial counseling area.

Traditionally, many of our students from the Certified Financial Planner™ program find jobs in Kentucky and in the Nashville, TN region, although graduates have been placed in Charlotte, NC, Orlando, FL, Atlanta, GA, St. Louis, TN, Minneapolis, MN, and other major metropolitan areas. Being centrally located, relative to the majority of the U.S. population, WKU's Finance Department has been able to establish relationships with employers throughout the region.

4. **List any institutions offering a similar program. Refer to <https://dataportal.cpe.ky.gov/KYAcademicProgInventory.aspx> to attain program listings using the same CIP code at other institutions.**

There are 24 university-based degree programs in the United States that offer education leading to the ability to secure the Accredited Financial Counselor® (AFC®) certificate through the AFCPE. The programs that are geographically closest to WKU are listed below.

The Accredited Financial Counselor program that is most like WKU's program is Ohio State University's 3-course Accredited Financial Counselor program. See institution 3, below.

Institution 1: SPAULDING UNIVERSITY (LOUISVILLE, KY)

Program Name: Post-Bachelor's Certificate: Financial Planning

Similarities/Differences with Proposed Program:

The Spaulding University's Certificate Program in Financial Planning requires 23 hours of financial planning/accounting/finance courses, and 12 hours of core business courses. There is not a separate certificate program for the AFC® certification. However, the Certificate in Financial Planning program they offer makes students eligible to sit for the Certified Financial Planner™ examination, as well as obtain the AFC® certificate.

WKU's Business Finance (Personal Financial Planning concentration) track, and the WKU Certificate in Personal Financial Planning (21 credit hours, as recently modified), are similar to the above. While we anticipate a few students in our current program may obtain the AFC® certificate through the AFC, most will pursue certification as a Certified Financial Planner™ following graduation. The CFP® certification is more robust than the AFC® certification, in terms of depth of knowledge of tax planning, estate planning, insurance planning, and – most significantly – in terms of knowledge of investment

strategies and investment products (of which the AFC® certificate provides little coverage).

Institution 2: UNIVERSITY OF MISSOURI

Program Name: Personal Financial Planning / Personal Financial Management Services / Financial Counseling (all bachelor's programs); Personal Financial Management Services Minor; Personal Financial Planning Undergraduate Certificate Program

Similarities/Differences with Proposed Program:

Similar to Spaulding University, there is no separate "Accredited Financial Counselor" certificate program within the university. However, three undergraduate majors, one minor, and one 19 credit hour certificate program qualify to meet the AFC® educational requirements, for purposes of sitting for the AFC® exam through the AFCPE.

Similarly, the UNIVERSITY OF GEORGIA's undergraduate degree program in financial planning, while designed to cover all of the content required by the Certified Financial Planner Board of Standards, Inc. for Certified Financial Planner™ certification, also covers the more limited content of the Accredited Financial Planner® certificate.

Institution 3: OHIO STATE UNIVERSITY

Program Name: Accredited Financial Planner three-course program

Similarities/Differences with Proposed Program:

The Department of Human Sciences, in collaboration with the College of Social Work, also offers a three-course education sequence that qualifies students to take the Accredited Financial Counselor® certification exam. The courses include:

CSCFFS 2260 Family Financial Management

CONSCI 2910 Consumer Problems and Perspectives

HDFS 2210 Helping Skills in Context or SOCWORK 3501 Engagement and Interviewing Skills

The Department of Human Sciences' three-course curriculum emphasize counseling skills, whereas WKU's three-course curriculum emphasizes the acquisition of technical expertise while incorporating the development of financial counseling skills through exercises and activities in each class.

The programs are similar, however, in that three courses are required for the certificate, and the educational content required by the AFCPE is covered within those three courses. Additionally, by limiting the educational content to three courses, students in other majors who desire/need financial literacy and financial counseling skills, can take the courses without substantially adding to their undergraduate degree requirements.

- 5. Provide a budgetary rationale for creating this certificate program. If the certificate will use current faculty and existing courses, be sure to address any positive budgetary impacts.**

The GFCB / Department of Finance will utilize current faculty and existing courses. No additional courses are required.

The primary economic rationales for the program include:

- Provide students in the other degree programs with a certificate that will enhance their skills, and increase their employability.
- Attract more students to WKU's other degree programs, by offering a distinctive certificate program that enhances these education, psychology and social work undergraduate degree programs, and that is not offered in this format at nearly all other colleges and universities within our region. In addition to augmenting their careers in these fields, some graduates may start their own financial counselor practices, which is a growing field within the larger financial services industry.
- Some students who take the three-course certificate program leading to Accredited Financial Counselor® certification may desire to add an additional four courses, in order to obtain the Certificate in Personal Financial Planning offered by the Department of Finance, in order to be able to sit for the Certified Financial Planner™ exam. This would likely involve additional courses taken by students in the education, psychology and social work degree programs, above and beyond the 120-credit hour requirements, which may lead to more revenue for WKU. In addition, should students pursue the Certificate in Personal Financial Planning, this also may lead to a supplemental part-time career, or an additional career path, for such students.

We believe that no additional sections of existing courses will be required.

The Bachelor of Arts in Psychology and the Bachelor of Social Work degree programs each possess enough general electives that students can incorporate the Accredited Financial Counselor certificate into a 120-credit hour course of study without taking additional courses. The College of Education's degree programs may require additional courses, over and above the 120-credit hour requirement, depending upon the specific course of study the student undertakes.

6. **Expanding on the rationale submitted through the WKU curricular process, use any data source (Gray Data, etc.) to provide additional rationale for your program. Address on how it pertains to the recruitment and retention of students, the job market, the value of the credential, and student interest. EMSI data is available through the Division of Extended Learning and Outreach. Contact Anna Kerr (Anna.olson@wku.edu) to get EMSI data for your rationale.**

The Provision of Financial Advice, Generally. There are increased employment opportunities for the provision of financial advice, generally. The average age of financial advisors is approximately 55, and one-fifth are age 65 or over, according to the J.D. Power 2019 U.S. Financial Advisor Satisfaction Study. Advisors under the age of 40 account for only 11% of the financial advisor population. *Id.*

"Financial advisor" is ranked #6 in "Best Business Jobs" by U.S. News and World Report (retrieved 4/24/2020). As stated by this publication, "Good financial advisors and good teachers

tend to have a lot of traits in common ... advisors must be able to listen to their clients, explain complex ideas in easy-to-understand ways and be able to sympathize with their clients.:

Jobs for Accredited Financial Counselors. Specific to *financial counseling*, a search for the term “financial counselor” in Kentucky found “financial counselor” jobs associated with military bases (Ft. Knox, Ft. Campbell), with salary ranges fromn \$24,000 to \$54,000 (per Glassdoor.com). Financial aid counselors are associated with colleges and universities, and financial counselors are also associated with hospitals and other medical service providers. Financial counselors are also employed by non-profit credit agencies.

Some financial counselors also possess their own financial counseling practices, providing advice on debt management, budgeting, and related matters. They tend to specialize in problems common to low- and middle-class families like debt, credit issues and building fundamental financial management skills – although these problems are not unique to particular income brackets. Unlike Certified Financial Planners™, they typically do not advise upon, nor sell, investments or insurance products.

While there are more than one certifying bodies in the field of financial counseling, the AFCPE is the most respected. The AFCPE states: “The AFC® designation enables the individual to work with clients in a financial counseling or education setting to assess and improve their financial decision making. AFC certified professionals work all over the world as researchers, educators, University Extension staff, private practitioners, and military financial counselors. They work in financial planning firms, law firms, credit and debt repayment agencies, banks and credit unions, government agencies, and many other organizations committed to improving the financial capability of individuals and families. 3,106 AFC® are in practice, as of Dec. 2019, in the United States.”

Accredited Financial Planning Certificate as a Supplement to the Social Work, Psychology, Sociology, and High School Education Professions. As stated previously, the primary purpose in offering the Accredited Financial Counselor certificate at WKU is to increase the employability and success of those involved in fields in which financial counseling plays a role. To this end, the following research is pertinent:

- **Financial Literacy and Social Work Students: Knowledge is Power**

Journal of Financial Therapy, Volume 3, Issue 2 (2012)

Martie Gillen, Ph.D., University of Florida

Diane N. Loeffler, Ph.D., University of Kentucky

“The continued economic turmoil makes it imperative for the profession of social work, specifically within academic programs, to teach students how to utilize their education, training and skills to promote social and economic justice and to create social change on multiple levels, in numerous setting, and with clients in diverse economic situations. In order to create curricular components that can help social workers provide information and services to marginalized populations, educators must first better understand the financial literacy of social work students. The purpose of this pilot study was to better understand the financial literacy of undergraduate and graduate social work students.

Findings suggest that students are not gaining the skills they need to successfully navigate the complexities of the personal finance landscape. Further, it suggests that they will not be well-equipped to help clients in this area. Social workers, especially those having only a bachelor's degree, work primarily in case management positions wherein they may be called upon to help clients in this area. Academics should consider creating opportunities for education to enhance student competency in this area."

- **The Case for High School Financial Literacy**

Excerpts from an article posted by Champlain College:

<https://www.champlain.edu/centers-of-experience/center-for-financial-literacy/report-national-high-school-financial-literacy/the-case-for-high-school-financial-literacy>

"Personal finance education should start early at both home and school. Ideally, personal finance concepts should be taught in elementary, middle and high school, and should continue into college. In mathematics, you start with counting, move on to addition and subtraction, and then move on to division and multiplication. You need to learn letters before you can read. Personal finance education should be a cumulative process, with age-appropriate topics taught each school year. The reality is that many states and school districts do not provide any substantive personal finance education until high school, if at all.

"The basics of personal financial planning-teaching young people about money, its value, how to save, invest and spend, and how not to waste it-should be taught in school as early as elementary school. But too many school districts teach personal finance for the first and only time in high school.

"According to the National Center for Education Statistics, in 2015, 69% of students enrolled in college in the fall immediately following high school completion. That means that about 31% of students are likely entering the workforce after high school. For those graduates who choose to go on to higher education, personal finance education in college is often scant and scattered, with few colleges offering a personal finance elective and even fewer requiring personal finance instruction as a graduation requirement. Regardless of when a young person's formal education ends, they will be thrust into situations where they need to know how to manage daily living expenses. So, high school seems like the best and most logical place to deliver personal finance education to America's youth"

- **Psychology, Sociology, Psychological Sciences and The Accredited Financial Counselor®**

"What Is A Financial Therapist, And Do I Need One?"

Money matters come with all the feels. Here's how you can address them.

By Paula Reid, April 22, 2019

"Slowly but surely, our culture is starting to acknowledge that money matters come with all the feels—many of which stem from systemic issues of gender inequity. An emerging

field of professionals who integrate psychology with financial advising may very well be the resource we need.

“It’s a lesson learned early on, from the first time we discover there aren’t enough pennies in the piggy bank to cover what we covet: Money isn’t just a matter of numbers. And as our lives become more complex, so does the process of managing one’s finances. It’s a process that impacts our self-worth, confidence, lifestyle, relationships, friendships, careers and just about everything in between. And as such, it can take a real toll on our overall wellbeing. According to a 2012 survey conducted by the Citizen’s Advice Bureau, 74 percent of respondents reported that their debt takes a toll on their mental health.

“Enter the relatively new field of finance therapy. Psychologist and financial therapist Bradley Klontz sums the practice up thusly: ‘People will often know that they should do better, but can’t do better. So I recommend financial therapy if their disorders start to leading to significant impairment in their lives.’

“Finances are a deeply personal issue, with each individual holding a set of values that is incumbent on their upbringing, career trajectory and the culture in which they were raised. When our values and resources come up against challenges, the struggle can be paralyzing.

“‘We weren’t taught [how to cope], and we’re all adults trying to learn this for the first time,’ says Bari Tessler, financial therapist and founder of The Art of Money, adding that for many of us, ‘we’re also trying to learn emotional literacy for the very first time.’

“So, what does a financial therapist even do?

“It’s a field that’s emerged alongside a number of studies indicating a strong connection between finance and mental health. As Tessler puts it, it’s a matter of asking the question of why we make the financial decisions we do. ‘That’s the psychology part of it. I get so many people who [had been going] to a financial planner to get a budget, and then they wouldn’t do it, because they had all these psychological issues they couldn’t understand.’

“Financial therapists provide a safe space to open up and talk about money in a judgment-free space, when the overwhelming impulse may be to just curl up in a ball. ‘But it’s also an opportunity to work with those emotions. I don’t expect them to go away. Learn how to work with your feelings and understand what they are,’ says Tessler.

“Speaking to the financial literacy gap that can have the effect of compounding stress for women in particular, financial therapy may be an even more essential tool, according to Tessler: ‘It takes small steps,’ she says. ‘We need good teachers, books and courses. It’s so important for girls and women to learn how to have a healthy and creative—and even fun—relationship to money.’

“And while there are professionals emerging specifically to address the need for financial therapy, it’s a service that’s wending its way into more traditional financial

advice roles as well, with planners and advisors adopting a more holistic approach to helping their clients.

“We all have a tendency to have a lot of shame around our finances, but what I have found to be true is that if we can understand where we grew up, what your parents taught you, and what was happening culturally, your beliefs around money...will all make perfect sense,’ says Klontz.”

**CITIZENSHIP & SOCIAL JUSTICE
UNDERGRADUATE CERTIFICATE**

REQUEST: Approval of an Undergraduate Certificate in Citizenship & Social Justice offered through the Potter College of Arts and Letters.

FACTS: The Institute for Citizenship & Social Responsibility was created in AY 2009/10. In AY 2010/11, an 18 hour certificate was created. In AY 2014/15, the institute was renamed the Institute for Citizenship & Social Justice and the certificate became a 22 hour minor of the same name. In AY 2019/20, the Institute was dissolved, the minor moved to the department of sociology and criminology, and marked for “transformation” through the Comprehensive Academic Program Evaluation (CAPE) process. The rationale for the proposed certificate remains the same as stated when the first certificate program was created in 2010/11 “Western Kentucky University has long been a leader in civic education and community engagement” and the certificate “builds upon the institution’s commitment to educating reflective and socially responsible citizens.” Specifically, we propose that the minor revert back into a certificate as we believe the shared core between the departments of political science and sociology & criminology offers **market-ready skills** associated with social advocacy and political change. These revisions truly reflect a transformation both in content and organization.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: One new course is being created alongside creation of this certificate, other courses are already being offered and can accommodate additional students. Staffing has been considered and availability of courses is known. No new faculty resources are needed at this time.

RECOMMENDATION: President Timothy C. Caboni recommends approval of an Undergraduate Certificate in Citizenship & Social Justice with implementation Fall 2020.

MOTION: Approval to establish an Undergraduate Certificate in Citizenship & Social Justice effective Fall 2020.

**Potter College of Arts and Letters
Department of Sociology and Criminology
Proposal to Create a New Certificate Program (Action Item)**

Contact Person: Dr. Holli Drummond, holli.drummond@wku.edu, 270-745-2259

1. Identification of program:

1.1. **Program title:** Certificate in Citizenship & Social Justice

1.2. **Required hours in program:** 21

1.3. **Special information:**

The program is interdisciplinary with a core that is shared between the Departments of Political Science and Sociology & Criminology. Students with the following majors are likely to enroll in this program: Sociology, Political Science, Philosophy, Diversity & Community Studies, English, Broadcasting, Photojournalism, and Communication Studies.

1.4. **Catalog description:** The Certificate in Citizenship and Social Justice is an interdisciplinary program, focusing on contemporary social issues, that prepares students to be effective citizens—civic agents of change for the common good. The certificate program includes both coursework and co-curricular public work. The market-ready skills honed by the certificate in Citizenship & Social Justice open many opportunities, both locally and outside the region. For those interested in the public sector, there are openings in local, state, and federal governmental agencies, as well as educational institutions. Regarding private-sector work, organizations and businesses are increasingly interested in students with empathetic listening skills resulting in successful social media and other marketing campaigns, consulting, and entrepreneurship endeavors. The program requires 21 hours with a 15 hour core and 6 hours of electives selected from a list of courses.

Suggested Course Sequence

First Semester

CSJ 200: Introduction to Social Justice

Second Semester

PS 275: Introduction to Citizenship

Third Semester

PS 375: Political Campaign Management
Elective

Fourth Semester

SOCL 312: Collective Behavior & Social Movements
Elective

Final Semester

CSJ 499: Capstone in Citizenship & Social Justice or CRIM 439: Internship in Criminology or PS 403: Field Studies in Politics or PS: 405 Washington Internship & Academic Seminar or SOCL 494: Internship in Sociology

1.5. **Classification of Instructional Program Code (CIP):** 33.0104 – Community Involvement

2. Learning outcomes of the proposed certificate program:

Upon completion of the certificate requirements, students will be able to:

- Demonstrate knowledge of the meanings of social justice & citizenship;
- Explain key concepts in social justice & citizenship such as: equity, dignity, solidarity, rights, responsibility, recognition, agency, opportunity, and freedom;
- Explain the theoretical frameworks that exist in social justice movements as well as the processes defining democratic participation;
- Analyze the socio-political nature of categories that are often assumed to be natural (race, gender, sexuality, etc.);
- Investigate ways to put theory into social and political action.

3. Rationale:

3.1 Reason for developing the proposed certificate program: The Institute for Citizenship & Social Responsibility was created in AY 2009/10. In AY 2010/11, an 18 hour certificate was created. In AY 2014/15, the institute was renamed the Institute for Citizenship & Social Justice and the certificate became a 22 hour minor of the same name. In AY 2019/20, the Institute was dissolved, the minor moved to the department of sociology and criminology, and marked for “transformation” through the Comprehensive Academic Program Evaluation (CAPE) process. The rationale for the proposed certificate remains the same as stated when the first certificate program was created in 2010/11 “Western Kentucky University has long been a leader in civic education and community engagement” and the certificate “builds upon the institution’s commitment to educating reflective and socially responsible citizens.” Specifically, we propose that the minor revert back into a certificate as we believe the shared core between the departments of political science and sociology & criminology offers **market-ready skills** associated with social advocacy and political change. These revisions truly reflect a transformation both in content and organization.

3.2. Relationship of the proposed certificate program to other programs now offered by the department: The department of sociology and criminology has three majors and two minors. The department of political science has three majors, a minor, and an associates of arts. One core course retains the interdisciplinary CSJ prefix, while three are electives in the sociology or political science curriculum. The final requirement provides multiple avenues for applied practice either as a group (via the CSJ 499: Capstone in Citizenship & Social Justice) or individual (4 internship options available in CRIM, PS, or SOCL).

3.3. Relationship of the proposed certificate program to certificate programs offered in other departments: There are no certificate programs to which the proposed certificate is related.

3.4. Projected enrollment in the proposed certificate program: 25-50

3.5. Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): The closest related certificates are: The University of Louisville’s 12 hour certificate in *Peace, Justice, and Conflict Transformation* & the University of Kentucky’s 12 hour certificate in *Peace Studies*. Turning to our benchmarks, Florida Atlantic University has a certificate in *Peace Justice and Human Rights*, Ohio University has certificate in *Law, Justice, and Culture* and UNC Greensboro has a certificate *Peace and Conflict*. Thus, the Certificate in Citizenship and Social Justice would complement, not compete with other programs in the state and benchmark institutions.

3.6 Relationship of the proposed certificate program to the university mission and objectives: According to WKU’s mission and objectives as outline in the 2018-2028 *Strategic Plan*, the certificate in Citizenship & Social Responsibility addresses the 5th goal within *Our Students* “Prepare students for career and life in a global context” and the 3rd goal within *Our Hill* “Increase faculty participation in programs offered through the Center for Innovative Teaching and Learning to build a culture of innovation through the use of current and emerging instructional technologies, and create specific programming to enhance teaching and active learning.” **Specifically**, the core animates citizenship & action toward social justice through the hands-on experiences required in 3 of 5 courses. This approach naturally offers “high-impact practices to develop hard and soft skills as well as to cultivate good, productive citizens” while also providing “immersive learning in different cultures, process-learning

practices, and collaborative learning and instructional opportunities.” However, the certificate in Citizenship & Social Justice perhaps best addresses the first goal within *Our Community & Beyond* as the intent of the program is to both “Engage with the communities we serve to be a resource and partner in finding innovative solutions to social, economic, and other Challenges” and “Align university priorities with communities, business and industry, educational institutions, and others to create a mutually beneficial cultural, environmental, scientific, and social opportunities for all.” **In fact**, a successful program in Citizenship & Social Justice partners WKU with community organizations, businesses, and agencies to engage in meaningful dialogue and problem solving addressing some of the most complex social and political challenges of the day.

4. Curriculum:

Core Requirements (15 hours)

CSJ 200: Introduction to Social Justice

PS 275: Introduction to Citizenship

SOCL 312: Collective Behavior & Social Movements

PS 375: Political Campaign Management

CSJ 499: Capstone in Citizenship & Social Justice or CRIM 439: Internship in Criminology or

PS 403: Field Studies in Politics or PS 405 Washington Internship and Academic Seminars or

PS 490: Internship in State Government or SOCL 494: Internship in Sociology

Elective Requirements (6 hours)

AFAM 190: Introduction to AFAM

AFAM/HIST 329: Black Intellectual History

AFAM/HIST 343: Communities of Struggle

ANTH 360: Applied Anthropology

CSJ 301: Seminar in Social Justice

CSJ 435: Reimagining Citizenship

DCS 300: Public Problem Solving

FLK 330: Cultural Connections and Diversity

GWS 200: Introduction to Gender and Women’s Studies

HON 251: Citizen & Self

PHIL 103: The Committed Life

PHIL 323: Social Ethics

PS 110: American National Government

PS 338: Government & Ethics

SOCL 240: Global Social Problems

SOCL 362: Race, Class, and Gender

SOCL 452: Social Change

SWRK 300: Diversity and Social Welfare

SWRK 395: Social Welfare Policy & Issues

5. Budget implications:

One new course is being created alongside creation of this certificate, other courses are already being offered and can accommodate additional students. Staffing has been considered and availability of courses is known. No new faculty resources are needed at this time.

6. Proposed term for implementation: Fall 2020

7. Prior committee approvals:

Committee	Approval Dates
Department of Sociology & Criminology	11/01/2019
PCAL Curriculum Committee	02/04/2020
Undergraduate Curriculum Committee	02/25/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

WORKPLACE COMMUNICATION UNDERGRADUATE CERTIFICATE

REQUEST: Approval of an Undergraduate Certificate in Workplace Communication offered through the Potter College of Arts and Letters.

FACTS: Modern organizations are characterized by flatter hierarchical structures, advanced technology tools, and global partnerships. Now, more than ever, employees need communication skills specific to working on project teams, exchanging information, and working with diverse employees from around the world. In fact, a 2016 National Association of Colleges and Employers survey cited the ability to communicate verbally, work in a team structure, and solve problems among the top three skills needed by college graduates. While many national surveys provide similar results regarding employee skills (AAC&U, 2015; Clokie & Fourie, 2016; Cyphert, Holke-Farnam, Dodge, Lee, & Rosal, 2019; LinkedIn Survey; Robles, 2010; LinkedIn Survey, 2019), there is also evidence of skill deficiencies within the region. Project Paragon, a 2016 workforce development survey conducted in South Central Kentucky echoed these findings and identified: maintaining effective interaction (under stressful working conditions), problem solving (problem recognition, information interpretation, and solution formulation), sociability (maintaining positive working environments with stakeholders and handling conflict situations), active listening, team work, and self-confidence as critical and serious training needs for our area. Furthermore, in a January 2019 forum, business leaders from Bowling Green addressed the WKU Comprehensive Academic Program Evaluation (CAPE) committee and provided a synopsis of needed skills in WKU graduates. The speakers identified the following communication soft skills: teamwork, collaboration, decision-making, conflict management, interpersonal communication, persuasion, multicultural communication, critical thinking, speaking, and writing among their top needs. While the curriculum for majors in higher education focuses on technical skills, Watts and Watts (2008) found that managers credited 85% of employee success to soft skills and 15% to hard skills. The proposed certificate in Workplace Communication provides an opportunity for students to build the communication skills critical to their employability and success.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: Faculty in the Department of Communication will teach the courses which are already integrated within the Communication Studies and the Corporate and Organizational Communication majors. Increases in enrollment may necessitate the need for hiring adjunct faculty.

RECOMMENDATION: President Timothy C. Caboni recommends approval of an Undergraduate Certificate in Workplace Communication with implementation Fall 2020.

MOTION: Approval to establish an Undergraduate Certificate in Workplace Communication effective Fall 2020.

**Potter College of Arts and Letters
Department of Communication
Proposal to Create a New Certificate Program (Action Item)**

Contact Person: Holly Payne, holly.payne@wku.edu, 270-745-5876

1. Identification of program:

1.1. **Program title:** Workplace Communication

1.2. **Required hours in program:** 18

1.3. **Special information:** The certificate is available to students from any major and was designed with consideration of transfer students and dual-credit students entering WKU with required courses. Additionally, the certificate is available to non-traditional students wishing solely to earn this undergraduate certificate. All classes must be completed with a “C” or higher.

1.4. **Catalog description:** Interpersonal communication skills within the workplace are rated by organizations and leaders as important for employee success. In fact, many employers go so far as to emphasize communication skills such as team communication, problem solving, and conflict resolution as more important than the technical skills needed for different professions. The certificate in Workplace Communication is an 18 credit hour program designed to equip students with practical and meaningful communication skills for workforce success. The certificate allows students from any major to explore their own patterns of communication and that of others so that they can construct competent messages for different audiences within professional settings. Through hands-on learning experiences, students will engage and practice the skills needed to communicate with confidence even in difficult situations. Students will complete six courses including: COMM 145, COMM 240, COMM 330, COMM 349, COMM 348, and COMM 365.

1.5. **Classification of Instructional Program Code (CIP):** 09.0901 – Organizational Communication, General

2. Learning outcomes of the proposed certificate program: Students completing the certificate in Workplace Communication will be able to:

- Create, communicate, and adapt messages appropriate to business audiences, purposes, and contexts;
- Critically analyze messages by engaging in active listening and enacting mindful responses to messages;
- Perform verbal and nonverbal communication behaviors that illustrate self-efficacy in accomplishing communicative goals;
- Demonstrate the ability to recognize cultural differences and adapt one’s communication to culturally diverse audiences;
- Demonstrate the steps of the problem-solving process with emphasis on team building behaviors;
- Analyze and resolve conflict using appropriate and constructive resolution methods.

3. Rationale:

3.1 **Reason for developing the proposed certificate program:** Modern organizations are characterized by flatter hierarchical structures, advanced technology tools, and global partnerships. Now, more than ever, employees need communication skills specific to working on project teams, exchanging information, and working with diverse employees from around the world. In fact, a 2016 National Association of Colleges and Employers survey cited the ability to

communicate verbally, work in a team structure, and solve problems among the top three skills needed by college graduates.

While many national surveys provide similar results regarding employee skills (AAC&U, 2015; Clokie & Fourie, 2016; Cyphert, Holke-Farnam, Dodge, Lee, & Rosal, 2019; LinkedIn Survey; Robles, 2010; LinkedIn Survey, 2019), there is also evidence of skill deficiencies within the region. Project Paragon, a 2016 workforce development survey conducted in South Central Kentucky echoed these findings and identified: maintaining effective interaction (under stressful working conditions), problem solving (problem recognition, information interpretation, and solution formulation), sociability (maintaining positive working environments with stakeholders and handling conflict situations), active listening, team work, and self-confidence as critical and serious training needs for our area. Furthermore, in a January 2019 forum, business leaders from Bowling Green addressed the WKU CAPE committee and provided a synopsis of needed skills in WKU graduates. The speakers identified the following communication soft skills: teamwork, collaboration, decision-making, conflict management, interpersonal communication, persuasion, multicultural communication, critical thinking, speaking, and writing among their top needs. While the curriculum for majors in higher education focuses on technical skills, Watts and Watts (2008) found that managers credited 85% of employee success to soft skills and 15% to hard skills. The proposed certificate in Workplace Communication provides an opportunity for students to build the communication skills critical to their employability and success.

- 3.2. **Relationship of the proposed certificate program to other programs now offered by the department:** The proposed certificate program will take the place of the Communication Studies minor, which will be suspended. At this time, the department only has one Certificate program in the Advertising area, User Experience. The UX certificate focuses on designing interactive platforms for digital content.
- 3.3. **Relationship of the proposed certificate program to certificate programs offered in other departments:** The proposed certificate has some overlap with a certificate in the Gordon Ford College of Business entitled Advanced Professionalism which is 24 hours. AP is an interdisciplinary certificate where students select courses from areas such as Communication, English, Management, and Marketing. While there might be overlap in some of the Communication courses offered as electives, the AP certificate is limited to Business students only and has a focus on writing, personal selling, and critical thinking in management.
- 3.4. **Projected enrollment in the proposed certificate program:** We project initial enrollment to begin at 50 students with growth to at least 75 students. This projection is based on the current enrollment of 42 students in the Communication Studies Minor, the number of current Communication majors (169) that could easily pick up the certificate as part of their coursework, and students from around the university who need a certificate or minor to pair with their major.
- 3.5. **Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):** Similar certificates are offered at universities around the country including Thomas Edison State University (Communications), University of South Dakota (Communication and Leadership), Kansas University (Professional Communication), CSU Santa Barbara (Communication Skills), Southwestern College (Organizational Communication). Within the state, Eastern Kentucky University offers a certificate in Communication Studies.

3.6 **Relationship of the proposed certificate program to the university mission and objectives:**
 The Certificate in Workplace Communication directly connects to the university’s mission of creating productive, engaged, and socially responsible citizen-leaders of a global society. This certificate addresses many of WKU’s core values by emphasizing cooperation, teamwork, and mutual respect for individual differences in scholarship, diversity, and culture. Furthermore, the Certificate in Workplace Communication most directly addresses three elements of the WKU Strategic Plan including: improving the quality of life within the region, becoming a regional lighthouse, and providing continuing education. This certificate will provide opportunities for people of the region to be educated; WKU graduates with skills to think critically, solve problems, and engage effectively with others; and, a marketable credential for WKU graduates.

4. **Curriculum:**
 COMM 145 Fund Speaking/Communication (3 hours)
 COMM 240 Effective Listening (3 hours)
 COMM 349 Small Group Communication (3 hours)
 COMM 330 Leadership Communication (3 hours)
 COMM 348 Interpersonal Communication (3 hours)
 COMM 365 Intercultural Communication (3 hours)
 Total Number of Credits Hours: 18

5. **Budget implications:** Faculty in the Department of Communication will teach the courses which are already integrated within the Communication Studies and the Corporate and Organizational Communication majors. Increases in enrollment may necessitate the need for hiring adjunct faculty.

6. **Proposed term for implementation:** Fall 2020

7. **Prior committee approvals:**

Committee	Approval Dates
Department of Communication	01/23/2020
PCAL Curriculum Committee	02/04/2020
Undergraduate Curriculum Committee	02/25/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

The WKU Board of Regents Academic Affairs Committee has requested additional market analysis information regarding your proposed certificate program. The deadline for the Office of the Provost to receive your follow-up information is **May 1 at 4:30 p.m.** If the follow-up information is not received by the deadline, the program will not be considered by the Board.

Gray Associates provides data on CIP codes and their relationship to student demand, competitive intensity, and employment within a state and national market. Review the data associated with the CIP code selected for the proposed certificate program from your department. Then, address the questions that follow.

Kentucky Data

GRAYASSOCIATES

Scoring Rubric

Program Rank

Scorecard

Prog x Market

Competitors

Data Table

Workplace Requirements

Historical Data

Crosswalks

Data Definitions

CIP: 09.0901 Organizational Communication, General

Market: Kentucky

Modality: All

Award Level: Certificate

Current Programs

Overall Score
(38 Percentile)

0

Student Demand (50 Percentile)

2

Category	Percentile	Criterion	Value	Score
Size	0	Inquiry Volume (12 Months)	0	0
	0	Int'l Page Views (12 Months)	0	NS
	0	Google* Search Volume (3 Months)	NA	NS
	0	Completion Volume	0	0
Growth	96	Inquiry Volume YoY Change (Units)	0	1
	0	Google* Search YoY Change (Units)	NA	NS
	93	Completion Volume YoY Change (Units)	0	1
	0	Inquiry Volume YoY Change (%)	NA	NS
	0	Google* Search YoY Change (%)	NA	NS
	0	Completion Volume YoY Change (%)	NA	NS

Degree Fit (49 Percentile)

0

Category	Percentile	Criterion	Value	Score
Completions		National Completions by Level	See	0
Workforce		National Workforce Ed Attainment	Below	0
NHEBI Natl 2 Year	0	Cost Index**	NA	NS
	0	Student: Faculty Index	NA	NS

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
Certificate	0%	0%	2%
Associates	0%	0%	0%
Bachelors	0%	82%	80%
Postbaccalaureate Certificate	0%	1%	0%
Masters	100%	17%	17%
Post-masters Certificate	0%	0%	0%
Doctoral	0%	0%	0%
Unknown	0%	0%	0%

Competitive Intensity (50 Percentile)

6

Category	Percentile	Criterion	Value	Score
Volume of Competition	0	Campuses with Graduates**	0	6
	97	Institutions YoY Change (Units)	0	0
	0	Average Completions/Institution	NA	NS
	0	Median Completions/Institution	NA	NS
	0	Program Size YoY Change (Units)	NA	NS
	0	Program Size YoY Change (%)	NA	NS
	0	Insts. with Program Online**	0	NS
	0	% of Institutions	NA	NS
	0	Online Completions**	0	NS
	0	% of Completions	NA	NS
Market Saturation	0	Completions per 1,000 Pop**	NA	NS
	0	Average Cost per Inquiry**	NA	NS
	0	Google Search * Cost per Click**	NA	NS
	0	Competition Index**	NA	NS

CIP Description

A program that focuses on general communication processes and dynamics within organizations. Includes instruction in the development and maintenance of interpersonal group relations within organizations; decision-making and conflict management; the use of symbols to create and maintain organizational images, missions, and values; power and politics within organizations; human interaction with computer technology; and how communications socializes and supports employees and team members.

Job Postings (Market)

Award Level	Minimum Education Requested	Award Level	BLS Workforce Edu (Natl)
- Unspecified -	20%	No College	9%
High School/Certificate	26%	Some College	14%
Associates	23%	Associates	6%
Bachelors	65%	Bachelors	42%
Masters	30%	Masters	23%
Doctoral	22%	Doctoral	6%

BLS Workforce Edu (Natl)

Employment* (29 Percentile)

-8

Category	Percentile	Criterion	Value	Score
Size	49	Job Postings Total (12 Months)	13	-2
	48	BLS Current Employment	105	-2
	50	BLS Annual Job Openings	12	-1
	0	Share of Generalist Employment	NA	NS
	0	Share of Generalist Openings	NA	NS
Growth	63	Job Postings YoY Change (Units)	2	NS
	64	Job Postings YoY Change (%)	15%	NS
	43	BLS YoY Change (%)	-1%	-2
	53	BLS 3-Year Historic Growth (CAGR)	1%	NS
	71	BLS 10-Year Future Growth (CAGR)	1%	NS
Saturation	18	Job Postings per Graduate	0.2	-2
	19	BLS Job Openings per Graduate	0.2	-2
	Pay and Outcomes	58	10th-Percentile Wages	\$38,628
54		Wages (Age < 30)	\$41,570	2
49		Wages (Age 30-60)	\$79,795	0
16		% with Any Graduate Degree	18%	NS
16		% with Masters	15%	NS
16		% with Doct/Prof Degree	4%	NS
40		% Unemployed (Age <30)**	3%	0
67		% Unemployed (Age 30-60)**	3%	0
42		% in Direct Prep Jobs	23%	NS
0		GE Wages - Assoc. & Cert	NA	NS
0	GE Placement Rate - Assoc. & Cert	NA	NS	

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.
** - Color scale in reverse.

NA - No data available/not currently tracked. NS - Not Scored in Rubrics (values = 0).
2-yr - Associates & certificate programs only.

<40% 40%+ 70%+ 90%+ 95%+ 98%+ Percentile

Export to PNG

National Data

Student Demand (7 Percentile) -1

Category	Percentile	Criterion	Value	Score
Size	0	Inquiry Volume (12 Months)	0	0
	0	Inf1 Page Views (12 Months)	0	NS
	0	Google* Search Volume (3 Months)	NA	NS
	61	Completion Volume	43	0
Growth	92	Inquiry Volume YoY Change (Units)	0	0
	0	Google* Search YoY Change (Units)	NA	NS
	17	Completion Volume YoY Change (Units)	-8	0
	0	Inquiry Volume YoY Change (%)	NA	NS
	0	Google* Search YoY Change (%)	NA	NS
	23	Completion Volume YoY Change (%)	-16%	-1

Degree Fit (49 Percentile) 0

Category	Percentile	Criterion	Value	Score
----------	------------	-----------	-------	-------

Inquiries and Completions

Award Level	Inquiries (Market)	Completions (Market)	Completions (National)
-------------	--------------------	----------------------	------------------------

Competitive Intensity (59 Percentile) 2

Category	Percentile	Criterion	Value	Score
Volume of Competition	60	Campuses with Graduates**	4	0
	88	Institutions YoY Change (Units)	2	0
	56	Average Completions/Institution	11	0
	58	Median Completions/Institution	6	0
	89	Program Size YoY Change (Units)	4	1
	91	Program Size YoY Change (%)	175%	1
	0	Insts. with Program Online**	0	NS
	0	% of Institutions	NA	NS
	0	Online Completions**	0	NS
	0	% of Completions	NA	NS
Market Saturation	48	Completions per 1,000 Pop**	0.00	NS
	0	Average Cost per Inquiry**	NA	NS
	0	Google Search * Cost per Click**	NA	NS
	0	Competition Index**	NA	NS

CIP Description

A program that focuses on general communication processes and dynamics within organizations. Includes instruction in the development and maintenance of interpersonal group relations within organizations; decision-making and conflict management; the use of symbols to create and maintain organizational images, missions, and values; power and politics within organizations; human interaction with computer technology; and how communications socializes and supports employees and team members.

Job Postings (Market)

Award Level	Minimum Education Requested
-------------	-----------------------------

BLS Workforce Edu (Nat)

Award Level	BLS Educational Attainment
-------------	----------------------------

Employment* (42 Percentile) -5

Category	Percentile	Criterion	Value	Score
Size	50	Job Postings Total (12 Months)	1,592	-2
	48	BLS Current Employment	6,243	-2
	48	BLS Annual Job Openings	627	-1
	0	Share of Generalist Employment	NA	NS
	0	Share of Generalist Openings	NA	NS
Growth	54	Job Postings YoY Change (Units)	121	NS
	41	Job Postings YoY Change (%)	8%	NS
	61	BLS YoY Change (%)	4%	0
	81	BLS 3-Year Historic Growth (CAGR)	4%	NS
	78	BLS 10-Year Future Growth (CAGR)	0	NS
Saturation	41	Job Postings per Graduate	0.8	-2
	35	BLS Job Openings per Graduate	0.3	-2
Pay and Outcomes	76	10th-Percentile Wages	\$47,840	2
	54	Wages (Age < 30)	\$41,570	2
	49	Wages (Age 30-60)	\$79,795	0
	16	% with Any Graduate Degree	18%	NS
	16	% with Masters	15%	NS
	16	% with Doct/Prof Degree	4%	NS
	40	% Unemployed (Age <30)**	3%	0
	67	% Unemployed (Age 30-60)**	3%	0
	42	% in Direct Prep Jobs	23%	NS
	0	GE Wages - Assoc. & Cert	NA	NS
0	GE Placement Rate - Assoc. & Cert	NA	NS	

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.
 ** - Color scale in reverse.

NA - No data available/not currently tracked. NS - Not Scored in Rubrics (values = 0),
 2-Yr - Associates & certificate programs only.

1. If the student demand total is less than 10, describe how you plan to market the program to increase student demand/interest at WKU.*

The Certificate in Workplace Communication will replace the Communication Studies minor which currently enrolls 31 students. The CAPE review process prompted this move toward delivering a more externally attractive certificate that will be available in face-to-face and online formats. Additionally, there are fewer classes required in the certificate (18 credit hours) than in the minor (24 credit hours) allowing for flexibility in faculty assignments.

The Certificate in Workplace Communication offers students the ability to earn an important credential that will improve their employability or, if already employed, enhance their upward mobility and job performance. Communication appears as a top skill needed by employers in 30% of *all* job postings in 2019/2020 (Emsi, 2020). Interestingly, less than 5% of job applicants include this skill as a part of their resume/employment profile. While many students would benefit from earning a bachelor's degree in the field of Communication, it is often not feasible to pair with other majors given the number of hours required in more technical fields.

Certificates offer an innovative curricular building block which, due to their streamlined, targeted nature, allow students to mix and match with their major to customize their own curriculum and course of study. Students from areas such as Journalism, Political Science, Psychology, and Public Relations often choose the Communication Studies minor to match with their major and we expect this level of student demand to increase as certificates help create value-added enhancements to a student's main areas of study. Additionally, for current employees, a certificate offers an accessible route toward earning a credential while introducing them to the university and its portfolio of degrees. The certificate allows development of a new market for WKU which we intend to deliver entirely online and potentially in a module format. Based on these different student groups we plan to take a three-prong approach to marketing the program.

First, we reviewed current majors on campus that allow for a second major or minor and that might also allow for enough free elective hours to add an 18-hour certificate without extending time toward graduation. We will employ direct marketing strategies such as email, advisor education, and infographic cards to be sent to students promoting the new certificate in addition to recruiting at advising, orientation, and majors/minors fair events.

Second, as the only certificate of its kind in the state, we have the opportunity to introduce dual credit and transfer students to the credential. Specifically, we plan to introduce transfer students and high school students who are earning dual/transfer credit for completing COMM 145 Public Speaking (one of the required certificate courses) to the certificate. If these students choose WKU, they can select specific Colonnade courses that also fit within the certificate such as COMM 365 Intercultural Communication and COMM 349 Small Group Communication. Creating pathways for students to focus their general education studies while also working toward this credential will be appealing. We can directly communicate with students and those enrolled in two plus two programs about this opportunity. This certificate offers an excellent opportunity to collaborate with WKU's KCTCS partners to potentially create enrollment pipelines into WKU. This would be particularly beneficial to regional campuses.

Third, this certificate will be appealing to students in the workforce who are looking to gain a credential outside of a traditional degree. Since many employers cite Communication Skill as one of the most important skills for graduates and new hires (see Table 1 below), we plan to market this certificate within the region to employers who are looking for professional development opportunities for employees and are willing to offer tuition assistance. We also intend to make the certificate accessible on-line and DELO and the Southcentral Workforce Board will assist with marketing to adult learners seeking to upskill and enhance their potential for leadership roles. Online marketing via Google Key Word searches, and Facebook Placement Ads will be utilized. Students who enroll in this certificate will be introduced to the university and other potential degree programs.

*Note: This certificate serves as a credential for enhancing employability by preparing employees to be skillful communicators at work, not to be Organizational Communication Specialists; therefore, the Gray Associates data which focuses on bachelor’s degrees in the Communication profession with CIP code 09.0901 do not provide an exact picture of demand or employability for students who earn this degree. That said, it does provide important information to support the need for communication skills across disciplines.

2. If the employment total is less than 5, provide a rationale on how this program can lead to employability of students. Address any partnerships developed to assist finding employment for students with this credential.

The student profile for this certificate will include nontraditional and traditional students. Data from multiple national surveys including AAC&U’s survey of employers and college students suggest a variety of communication skills as in demand (see Table 1). Additionally, a regional economic development study, Project Paragon involving 32 local employers identified maintaining effective interaction as a *critical* training need and problem solving, sociability, active listening, and teamwork as *serious* training needs for the region.

Table 1: Learning outcomes Four in Five Employers Rate as Very important (n= 400 Employers)	
Skill/Quality	% Employers Who Rate Each Outcome an 8, 9, or 10 on a 0–10 Scale
Ability to effectively communicate orally	85%
Ability to work effectively with others in teams	83%
Ability to effectively communicate in writing	82%
Ethical judgment and decision-making	81%
Critical thinking and analytical reasoning skills	81%
Ability to apply knowledge and skills to real-world settings	80%

Source: AAC&U, *Falling Short? College Learning and Career Success*, 2015.

Furthermore, Emsi data indicate a high demand for interpersonal, intercultural, team, and other communication skills within the region signaling high employability. Specifically, from January 2017 to March 2020 there were 2.14 million regional job postings which required the communication skills offered by this certificate. Fifty-four percent of the job postings included Communication within their top skills needed for their positions, while 32% listed Interpersonal Communication, 27% included Problem Solving, and 23% included Presentations. Gray Associates data also uses SkillsEngine, which identifies skills needed for employable graduates. SkillsEngine ranks Oral Expression as a top 4 soft skill for graduates in Engineering, Operations Management, System Engineering, Health Care Administration, Registered Nursing, Computer Networking, Computer Systems Analyst, Human Services, Banking and Financial Support Services, Human Resources Management, and Business Administration.

According to Emsi, the position postings requiring these Communication skills advertised a median salary of 60.1 K. The top companies seeking these skills included Anthem, Oracle, Teach for America, General Electric and many others with industries including Manufacturing, Professional Scientific and Technical Services, Finance and Insurance, Health Care and Social Assistance, Retail, and Education. The data indicate employers' desire to hire and train their employees in these areas.

- 3. List any institutions offering a similar program. Refer to <https://dataportal.cpe.ky.gov/KYAcademicProgInventory.aspx> to attain program listings using the same CIP code at other institutions.**

There are no other 4-year or 2-year institutions in Kentucky that currently offer a certificate in the area of organizational communication. Murray State University offers a Bachelor's degree in Organizational Communication and Spalding University offers a Bachelor's degree in Integrated Organizational Communication; however, both require substantially more hours than a certificate.

- 4. Provide a budgetary rationale for creating this certificate program. *If the certificate will use current faculty and existing courses, be sure to address any positive budgetary impacts.***

The certificate in Workplace Communication is composed of existing courses within the Communication curriculum and will replace the Communication Studies minor. Additionally, three of the six courses are available within Colonnade; therefore the department is well staffed to deliver the curriculum with no additional budget resources. At 18 hours, the certificate is shorter than the minor and will therefore be more cost efficient to deliver. The ease of attaining the certificate along with its targeted focus on providing today's students and businesses with what they need will lead to increases in enrollment.

We anticipate an enrollment of at least 75 students based on current enrollments in the Communication Studies minor, our recruitment efforts, student and employer demand. Increased tuition revenues should result.

- 5. Expanding on the rationale submitted through the WKU curricular process, use any data source (Gray Data, etc.) to provide additional rationale for your program. Address on how it pertains to the recruitment and retention of students, the job market, the value of the credential, and student interest. EMSI data is available through the Division of Extended**

Learning and Outreach. Contact Anna Kerr (Anna.olson@wku.edu) to get EMSI data for your rationale.

Consultation with DELO provided market data from Emsi regarding demand and value of the credential which will be offered fully online. First, a regional search including Kentucky, Indiana, Tennessee, Ohio, Georgia, Alabama, and Illinois indicated a high level of demand for communication skills across highly desirable industries such as Manufacturing, Professional and Scientific Services, Finance and Insurance, Health Care and Social Assistance, Retail, and Education. For example, 30% of position postings in Health Care Administration listed Communication as a top skill. The top occupations requiring *team building skills* include Registered Nurses, Customer Service Representative, and Software Developers/Engineers. Customer Service Representatives, Teachers, Human Resource Professionals, and Production Supervisors were in need of *interpersonal skills*; and, Teachers, Managers, Human Resource Professionals, and Social Services workers most need *intercultural communication skills*. Also of note, is that many positions seeking these highly valued skills involve management and leadership.

There are no other certificates in Workplace Communication in the region offered by higher education institutions, yet Emsi data indicate that from April 2019 to March 2020 the average number of internet searches per month for a Communication certificate was 590.

In addition to traditional learners at the university, the certificate in Workplace Communication will be marketed toward adult learners who are seeking promotions, upskilling, preparing for re-entry into the workforce, or switching positions or careers. The full portfolio of courses will go through the Quality Matters certification process, ensuring high quality online education that will assist in recruiting and retaining students. Also relevant to student retention is the plethora of online support services offered through DELO including online coaching and tutoring. Historically, the Department of Communication boasts high retention rates for students. The Communication Studies major and the Corporate and Organizational Communication major boast an 89% and 100% second year retention rate respectively. Since this certificate could easily be completed in two years, the two year retention rate is an appropriate measure of retention. We anticipate this number to remain stable for the certificate.

Based on the potential number of students, market demand for communication skills, and the Department of Communication's ability to retain students and staff courses with no additional budgetary requirements, the Certificate in Workplace Communication would make a valuable addition to WKU's curriculum.

**GAME DESIGN
UNDERGRADUATE CERTIFICATE**

REQUEST: Approval of an Undergraduate Certificate in Game Design offered through the Potter College of Arts and Letters.

FACTS: Data provided to WKU by the consulting firm Gray Associates suggests that game and interactive media design is a ripe area for growth at WKU. Data demonstrate the viability of a game and interactive media design program using three regional market indicators to support this conclusion. First, student demand for the program is strong. Paid-for inquiries into game and interactive media design are in the 95th percentile of all CIP codes in our region. This demand is likely to continue; year-over-year change in inquiries is also in the 95th percentile of all CIP codes. Second, the lack of competition in the region supports entering this market. According to Gray Associates data, there are no bachelor degree programs offered by any institution in Kentucky or our broader region offered under this CIP code. Finally, employment outcomes show some promise. Last year there were 825 total job postings to BurningGlass in our region over the last 12 months (as of January 23rd, 2020) matched to this CIP code. This was in the 90th percentile of all CIP codes available in the data. Even more impressively, there was a 159 unit increase in postings in our region from the previous year; this was in the 98th percentile of CIP codes.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: Courses can be staffed with existing faculty, with existing hardware and software, and in existing classrooms / labs in each of the three areas. No new faculty resources are needed at this time.

RECOMMENDATION: President Timothy C. Caboni recommends approval of an Undergraduate Certificate in Game Design with implementation Fall 2020.

MOTION: Approval to establish an Undergraduate Certificate in Game Design effective Fall 2020.

Potter College of Arts and Letters
Department of Art
Proposal to Create a New Certificate Program (Action Item)

Contact Person: Kristina Arnold; kristina.arnold@wku.edu; 270-745-6566

1. Identification of program:

1.1. **Program title:** Game Design

1.2. **Required hours in program:** 18

1.3. **Special information:** Game Design is an interdisciplinary certificate including departments from PCAL (Art, Communication) and OCSE (Computer Science). It is open to all students with an interest in computer game design. The certificate will be administered by the Department of Art for the PCAL Dean's office as one of PCAL's *Interdisciplinary Programs*. RAMP credit for students enrolled in the certificate (for certificate coursework) will be split evenly between OCSE and PCAL. (This split is possible, per October 8 email conversation with Tuesdi Helbig.)

1.4. **Catalog description:** This 6-course, 18-hour Game Design Certificate includes one basic Computer Science course (to be selected from CS 146 "Introduction to Programming" or CS 170 "Problem Solving and Programming" or CS 180 "Computer Science I" or CS 239 "Problem Solving with Computational Techniques"), one required Computer Science course (CS 301 "Game Programming"), one foundations-level art course (to be selected from ART 130 "2D Design" or ART 131 "3D Design" or ART 140 "Drawing I"), one required art course (ART 244 "Computer Animation I"), one Communication course (UX 380 "Gaming: Culture, Theory and Practice"), and one restricted elective to be selected from: ART 105; ART 106; ART 344; ART 390; ART 405; ART 431; ART 436; BCOM 264; CS 270; CS 290; ENG 203; ENT 312; MUS 120; PERF 101; POP 201; THEA 101; THEA 303; SOCL 245; UX 330; or an additional selection from the basic computer science courses (CS 146; CS 170; CS 180; CS 239). Within Computer Science, courses must be taken in numerical sequence, no other specific course sequences are necessary. This flexibility allows for multiple entry points into the program.

1.5. **Classification of Instructional Program Code (CIP):** 50.0411 – Game and Interactive Media Design

2. Learning outcomes of the proposed certificate program: Students who successfully complete the certificate will:

- Design and build a functioning game
- Demonstrate practical skills in at least one industry-standard programming language
- Explore at least one industry-standard game design engine
- Demonstrate the ability to successfully use the elements and principles of design to visually communicate ideas
- Demonstrate logic thinking, critical thinking skills, and problem solving

3. Rationale:

3.1 Reason for developing the proposed certificate program:

- Prospective Art and Computer Science students express significant interest in Game Design. It is one of the top programs that prospective students and families enquire about at recruiting events for both Art and Computer Science.
- Currently neither Art nor CS have a game design track, though for the past several years, both areas have been interested in creating one. Neither unit has the resources to create the track on their own, and the current team approach emerged through conversations begun in Spring 2019.

- Game design and its related components encompass a fast-trending jobs field.
- Being able to offer any Game Design program, with a related and sustained PR push, would assist with incoming student recruitment for two colleges.
- Few Game Design programs exist in our region, but they are developing quickly.

Additionally, data provided to WKU by the consulting firm Gray Associates suggests that game and interactive media design is a ripe area for growth at WKU. Data demonstrate the viability of a game and interactive media design program using three regional market indicators to support this conclusion. First, student demand for the program is strong. Paid-for inquiries into game and interactive media design are in the 95th percentile of all CIP codes in our region. This demand is likely to continue; year-over-year change in inquiries is also in the 95 percentile of all CIP codes. Second, the lack of competition in the region supports entering this market. According to Gray Associates data, there are no bachelor degree programs offered by any institution in Kentucky or our broader region offered under this CIP code. Finally, employment outcomes show some promise. Last year there were 825 total job postings to BurningGlass in our region over the last 12 months (as of January 23rd, 2020) matched to this CIP code. This was in the 90th percentile of all CIP codes available in the data. Even more impressively, there was a 159 unit increase in postings in our region from the previous year; this was in the 98th percentile of CIP codes.

3.2. Relationship of the proposed certificate program to other programs now offered by the department: This interdisciplinary certificate program will add a new art / design option to the areas currently offered by the Art Department. The area of game design is one currently requested by incoming students, but an area in which we do not yet offer a program. The discipline is related to animation, and will use coursework from this quickly growing departmental area. As the certificate is interdisciplinary, we anticipate students from both in and outside of the Art Department will enroll. This is the first certificate proposed by the Art Department, and we anticipate that it will add to the curricular options for our current students as well as introducing non-art students to our area.

3.3. Relationship of the proposed certificate program to certificate programs offered in other departments: As a corollary, this interdisciplinary certificate program will add a new curricular option to the areas currently offered by the Computer Science Program. The area of game design is one currently requested by incoming students, but one in which they do not yet offer a program. The discipline is related to programming, and will use coursework from that CS area. As the certificate is interdisciplinary, we anticipate students from both in and outside of the Computer Science Program will enroll. We anticipate that this certificate will add an option for students already in the CS program, and introduce students from outside the program to Computer Science.

3.4. Projected enrollment in the proposed certificate program: 25 – 35 students, with planned potential growth (based on similar growth in the related new Art Department animation program)

3.5. Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): Game Design offerings elsewhere in Kentucky and at our benchmark institutions are across the board, ranging from none to one or two courses offered; to certificates in game design; to related animation or interactive media programs; to degrees with a focus in Game Design. While most Universities in Kentucky have some game design offerings, no four-year degree programs specifically in Game Design exist in Kentucky and very few benchmark institutions outside of the state have specific programs in game design. Most of our benchmark institutions do have

programs in related areas such as animation or interactive design, with most of these programs originating in Art and Design units.

Within this cohort, Game Design programs originate and reside in many places, including Computer Science, Art, Communication, and Business schools and departments. *This proposed certificate at WKU is distinct in that it bridges disciplines and offers coursework in both computer science and visual art / design.*

3.6 Relationship of the proposed certificate program to the university mission and objectives:

This certificate prepares students for the global stage, as it “develops hard and soft skills,” providing a job-ready and industry-specific skillset. As a cutting-edge, interdisciplinary program, it **promotes a culture of innovation**. The program will promote WKU as a **regional lighthouse**, with a certificate that enables students to “graduate with skills to think critically (and) solve problems.” A Game Design certificate in a trending field will provide **continuing education** as one of WKU’s “certificate programs to match job market opportunities”.

4. Curriculum:

Game Design Certificate: 18 hours

Computer Science (6 hours)

- CS 146 “Introduction to Programming” (existing Colonnade course) OR CS 170 “Problem Solving and Programming” (existing course) OR CS 180 “Computer Science I” (existing course) OR CS 239 “Problem Solving with Computational Techniques” (existing course)
- CS 301 “Game Programming” (new course developed by current faculty)

Art (6 hours)

- ART 130 “Design” OR 131 “3D Design” OR 140 “Drawing” (Art & Design Foundations courses) (existing courses)
- ART 244 “Computer Animation I” (existing course)

Communication (3 hours)

- UX 380 “Gaming: Culture, Theory and Practice” (new course developed by current faculty)

Restricted Elective, select from (3 hours):

ANTH 448 Visual Anthropology
 ART 105 Art Survey: Prehistory to the Renaissance
 ART 106 Art Survey: Renaissance to Contemporary
 ART 344 Animation II
 ART 390 Contemporary Art
 ART 405 Art Theory and Criticism
 ART 431 Illustration
 ART 436 Electronic Illustration
 BCOM 264 Digital Video Production and Distribution – R. DeMarse, Jan 7
 CS 270 Introduction to Web Programming
 CS 290 Computer Science II
 ENG 203 Creative Writing
 ENT 312 Entrepreneurship – W. Peake, Dec 16
 MUS 120 Music Appreciation

POP 201 Introduction to Popular Culture Studies
 THEA 101 Acting I
 THEA 303 Acting for the Camera
 SOCL 245 Sociology of Popular Culture – Drummond; Dec 10
 UX 330 Interactive Design

Or another selection from:

CS 146 Introduction to Programming
 CS 170 Problem Solving and Programming
 CS 180 Computer Science I
 CS 239 Problem Solving with Computational Techniques

5. Budget implications:

Courses can be staffed with existing faculty, with existing hardware and software, and in existing classrooms / labs in each of the three areas.

6. Proposed term for implementation: Fall 2020

7. Prior committee approvals:

COMM approves their participation in the certificate, per Communication Departmental Undergraduate Curriculum Committee (email Jan 24, 2020); approval Dr. Helen Sterk (email Dec 17, 2019). Engineering and Applied Sciences (home of CS) approves their participation in the certificate, per Dr. Greg Arbuckle, Interim Dean OCSE (email Dec 5, 2019) and Dr. Stacy Wilson, Director, Engineering and Applied Sciences (email Dec 5, 2019).

Committee	Approval Dates
Department of Art	12/06/2019
PCAL Curriculum Committee	02/04/2020
Undergraduate Curriculum Committee	02/25/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

GRAPHIC DESIGN UNDERGRADUATE CERTIFICATE

REQUEST: Approval of an Undergraduate Certificate in Graphic Design offered through the Potter College of Arts and Letters.

FACTS: Data provided to WKU by the consulting firm Gray Associates suggests that Graphic Design is a potential area for growth at WKU. According to Gray, student demand regionally for graphic design programs is high. National data show high student demand, and high student employment following graduation with a graphic design degree.

Additionally, research conducted last year for our CAPE evaluations showed there is projected growth in Kentucky in *Arts, Design, Entertainment, Sports, and Media Occupations*, the sector most likely to hire graduates from this program, over the next five years, with an anticipated addition of more than 5,000 positions with a mean salary over \$45,000. The Kentucky Future Skills Report predicts more than 1,000 jobs will be added in graphic design-related positions alone, with salaries as high as \$60,000. In Spring 2019 there were over 1,000 print-related jobs in Kentucky, just *one* profession that is an offshoot of graphic design, posted on Indeed.com.

Last, as the Art Department has sustained 100+ majors in our 79-hour Graphic Design BFA program and 40+ Graphic Design minors for well over a decade, we can also attest to the continued demand for this type of training.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: Courses can be staffed with existing faculty (including full and part-time), with existing hardware and software, and in existing classrooms and computer labs. No additional budgetary needs are needed at this time. Fall 2020 implementation date.

RECOMMENDATION: President Timothy C. Caboni recommends approval of an Undergraduate Certificate in Graphic Design with implementation Fall 2020.

MOTION: Approval to establish an Undergraduate Certificate in Graphic Design effective Fall 2020.

Potter College of Arts and Letters
Department of Art
Proposal to Create a New Certificate Program (Action Item)

Contact Person: Kristina Arnold; kristina.arnold@wku.edu; 270-745-6566

1. Identification of program:

1.1. **Program title:** Graphic Design

1.2. **Required hours in program:** 18

1.3. **Special information:** The Graphic Design certificate is open to all students with an interest in graphic design. It is a slightly shorter version of the current Art Department 24-hour minor in graphic design, for students who would like an official certificate on their transcript or who want the increased flexibility in their overall curriculum that a shorter program offers. The certificate will pair well with Studio Art and P-12 Art Education majors and with majors outside of the Art Department. All courses in the certificate are offered in the Department of Art.

All of the Art Department's programs in art and design are accredited by the National Association for Schools of Art & Design; our accrediting body supports and promotes certificate programs and oversees all programs with a focus in graphic design.

1.4. **Catalog description:** This 6-course, 18-hour Graphic Design Certificate includes four required courses and two restricted electives, all taught in the Department of Art. Required courses are ART 130 Design OR ART 140 Drawing; ART 243 Digital Media; ART 231 Graphic Design; and ART 334 Graphic Design Survey (an art history course). Electives can be selected from ART 330 Graphic Design; ART 331 Visual Thinking; ART 430 Graphic Design; ART 431 Illustration; ART 432 Portfolio: Graphic Design; ART 433 Package Design; ART 436 Electronic Illustration and ART 438 Advanced Media Design. 100-level courses are prerequisites for 200-level courses; 200-levels are prerequisites for 300-levels; and 300-levels are prerequisites for 400-levels. If no 400-level courses are selected, the certificate can be completed in three semesters, or two semesters and a summer / January term.

This certificate will teach students to become more effective visual communicators. Students will learn the basic tenets, strategies and tools of visual communication and graphic design, including how to generate and edit images and visually-based multi-media content. Students will learn industry-standard tools and software for both analog and computer-aided design for digital, print and web applications; including page layout, image editing, and illustration. Students will gain experience in creating assets for use in book and scientific illustration and layout, advertising or marketing campaigns, and infographics. Elective courses allow for students to cater to more specific interests (for example illustration) if desired. Can be paired with any majors that would benefit from an enhanced ability in visual communication, including studio art, professional writing, marketing, advertising, journalism, broadcasting, film, entrepreneurship, and biology, among others.

1.5. **Classification of Instructional Program Code (CIP):** 50.0409 – Graphic Design

2. Learning outcomes of the proposed certificate program: Students completing the certificate in Students who successfully complete the certificate will be able to:

1. Utilize design thinking, processes and strategy to identify and solve visual communication problems
2. Create visual messages that address audiences and contexts by recognizing the physical, cognitive, cultural, and social human factors that influence design effectiveness

3. Demonstrate concepts, conduct necessary research, and synthesize ideas to create and analyze design solutions
4. Develop, produce, and implement a diverse collection of design assets for various platforms, including print and web, using a variety of tools and technologies
5. Demonstrate an understanding of the elements and principles of effective design (including visual organization and composition; information hierarchy; symbolic representation; typography; motion; sequencing; and the use of images and diagrams) to create original meaningful visual forms
6. Demonstrate aesthetic fluency by recognizing and applying principles of design history, theory, and criticism from a variety of perspectives
7. Demonstrate an understanding of industry practices, including proficiency in industry standard software and knowledge of the basic business practices and ethics related to graphic design
8. Demonstrate the ability to organize complex projects and work productively in teams, including the effective implementation and evaluation of projects.

3. Rationale:

3.1 Reason for developing the proposed certificate program: As our world becomes increasingly dominated by images and technology, the ability to communicate ideas (and in the corporate world to compete for viewers and buyers) becomes more and more tied to an individual or company's ability to create effective visual images and design strategies. Successful students graduating with a certificate in graphic design will be able to pair the skills, tools, and knowledge developed in the program with a wide variety of majors and interests to help them more effectively communicate content in their interest areas and to become more attractive candidates for employment in their fields.

Until Fall 2018, the Art Department's Graphic Design minor was restricted to Advertising Majors only. When advertising eliminated the Graphic Design minor as a requirement, it enabled the Art Department to open the minor to students across campus. The Graphic Design minor enrollment quickly increased by 25%, illustrating the broader interest in the program, and advisors across campus have been pleased that the minor is now available to their interested students. This certificate will give students in a variety of fields even more flexibility in tailoring their educational program by providing a second, less time-intensive graphic design option.

This certificate will also give working adults interested in shifting careers an option to retrain or enhance their skills. Based on the discipline and the reputation of the program, we get multiple inquiries about our graphic design program and courses weekly. One recent potential candidate reached out to find out more about the Art Department's design options, stating that "most of the working designers that she talked to [in the region] recommended WKU over any other options because of our strong program and quality reputation."

With a curriculum that requires progressively independent-level critical thinking and creative problem-solving skills, a disciplined work ethic and the ability to realize effective progress on multiple simultaneous projects, this program develops the skills needed to be effective in any position. Students develop strategies to effectively set and meet short and long-term goals and the skills to excel in a workforce position that demands creativity, attentiveness to detail, time and material management, hand and organizational skills, and the ability to research and synthesize multidisciplinary knowledge to create production-oriented solutions.

Data provided to WKU by the consulting firm Gray Associates suggests that Graphic Design is a potential area for growth at WKU. According to Gray, student demand regionally for graphic design programs is high. National data show high student demand, and high student employment following graduation with a graphic design degree.

Additionally, research conducted last year for our Comprehensive Academic Program Evaluation (CAPE) evaluations showed there is projected growth in Kentucky in *Arts, Design, Entertainment, Sports, and Media Occupations*, the sector most likely to hire graduates from this program, over the next five years, with an anticipated addition of more than 5,000 positions with a mean salary over \$45,000. The Kentucky Future Skills Report predicts more than 1,000 jobs will be added in graphic design-related positions alone, with salaries as high as \$60,000. In Spring 2019 there were over 1,000 print-related jobs in Kentucky, just *one* profession that is an offshoot of graphic design, posted on Indeed.com.

Last, as the Art Department has sustained 100+ majors in our 79-hour Graphic Design BFA program and 40+ Graphic Design minors for well over a decade, we can also attest to the continued demand for this type of training.

3.2. Relationship of the proposed certificate program to other programs now offered by the department: While the art department currently has no certificate programs, the Graphic Design Certificate is a more industry-focused subset of the current Graphic Design minor offered. With a 24-hour minor and an 18-hour certificate, the department hopes to be able to offer programs that complement majors both below 36 hours, and majors of 36 hours or more [to meet the magic number of 54 hours required in major / minor combinations for majors under 48 hours in total].

3.3. Relationship of the proposed certificate program to certificate programs offered in other departments: The proposed Graphic Design Certificate is related to the Certificate in User Experience (Communication) and the Game Design Certificate (Art / Comm / Computer Science) that is currently under development. While the certificates share an exploration of design thinking and industry tools used, they are each distinct in their specific focus areas.

3.4. Projected enrollment in the proposed certificate program: 25 – 35 students, with planned potential growth (based on similar growth in the related new Art Department animation program).

3.5. Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): No Graphic Design certificate programs exist at any of the other seven public institutions in Kentucky or at any of the 18 current out-of-state WKU benchmarks listed (www.wku.edu/instres/benchmark.php); in fact, no certificates of any kind are offered through the Departments of Art / Art & Design at any public institution in Kentucky, though we believe with the increased focus on certificate programs both at the state level and nationally, it is only a matter of time before they develop.

The only art and design-related certificates in this 28-school cohort currently offered are: a certificate in Apparel Design & Merchandising at ECU offered by the College of Health Sciences, with a similar certificate offered at the University of Southern Mississippi through Theatre and Merchandising; an 18-hour graduate-level certificate at Ball State in Emerging Media Design and Development (through the Journalism Department); a graduate certificate in Art History at Northern Illinois University; a post-baccalaureate certificate in Interactive Media Design at Towson University; and a post-baccalaureate certificate in Design and Making in Education (through the School of Education) at UNC Greensboro. A certificate in instructional design (more of an educational-psychology program than one based in art and design) is offered by BGSU, ETSU, Indiana State University, and the University of South Alabama.

3.6 Relationship of the proposed certificate program to the university mission and objectives: This certificate prepares students for the global stage, as it “develops hard and soft skills,” providing a job-ready and industry-specific skillset. As a technology-centric program, it promotes a culture of innovation. The program will promote WKU as a regional lighthouse, with a certificate that enables students to “graduate with skills to think critically (and) solve problems.” A Graphic Design Certificate will provide continuing education as one of WKU’s “certificate programs to match job market opportunities”.

4. Curriculum:

Graphic Design Certificate: 18 Hours
All courses are existing Art Department Courses.
 Required Courses (12 hours):
 ART 130 Design OR ART 140 Drawing
 ART 243 Digital Media
 ART 231 Graphic Design
 ART 334 Graphic Design Survey
 Restricted Electives (6 hours):
 ART 330 Graphic Design
 ART 331 Visual Thinking
 ART 430 Graphic Design
 ART 431 Illustration
 ART 432 Portfolio: Graphic Design
 ART 433 Package Design
 ART 436 Electronic Illustration
 ART 438 Advanced Media Design

5. Budget implications: Courses can be staffed with existing faculty (including full and part-time), with existing hardware and software, and in existing classrooms and computer labs.

6. Proposed term for implementation: Fall 2020

7. Prior committee approvals:

Committee	Approval Dates
Department of Art	01/24/2020
PCAL Curriculum Committee	02/04/2020
Undergraduate Curriculum Committee	02/25/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

Potter College of Arts & Letters
Department: ART
Proposal to Create a New Certificate Program
(Action Item)

Identification of program: Program title: Game Design

ADDENDUM: additional budget and market data

Contact Person: Kristina Arnold, Kristina.arnold@wku.edu; 270-745-6566

The Game Design Certificate provides an opportunity to develop a program that pairs design with computer technology and programming skills.

Game Design was identified as one of 5 areas of growth at the campus-wide January workshop with Gray Associates. Gray data also supports game design as a ripe area for growth at WKU based on three regional market indicators that include student interest, lack of similar programs in the region, and employability of graduates.

- Student demand for the program is strong. Paid-for inquiries into game and interactive media design are in the 95th percentile of all CIP codes in our region. This demand is likely to continue; year-over-year change in inquiries is also in the 95th percentile of all CIP codes.
- The lack of competition in the region supports entering this market. According to Gray Associates data, there are no bachelor degree programs offered by any institution in Kentucky or our broader region offered under this CIP code.
- Employment outcomes are promising. Last year there were 825 total job postings to BurningGlass in our region over the last 12 months (as of January 23rd, 2020) matched to this CIP code. This was in the 90th percentile of all CIP codes available in the data. Even more impressively, there was a 159 unit increase in postings in our region from the previous year; this was in the 98th percentile of CIP codes.

Initially, there will be no additional costs for the gaming certificate program, as it pulls existing courses together strategically to provide students with the necessary skills to enter the Game Design industry. Given extensive interest in this area, we are testing the market with a certificate, which could grow into an academic major. Growth beyond initial projections could require additional faculty and equipment resources that would be supported by revenue generated through the decentralized budget model. Success in this program could lead to growth of an academic major in game design as well as other market driven interdisciplinary pairings with computer science skills.

Identification of program: Program title: Graphic Design

ADDENDUM: additional budget and market data

Contact Person: Kristina Arnold, Kristina.arnold@wku.edu; 270-745-6566

The Graphic Design Certificate is a strategic 18-hour subset of the existing 79-hour major program. The content focuses on developing the concepts and tools needed for effective visual communication, including creating content for digital and print advertising, corporate and personal branding, and social media marketing. The certificate pairs well with any major in which developing and communicating ideas visually is necessary, including marketing, advertising, entrepreneurship, as well as professional writing and the sciences.

While the certificate lends itself to pairing with other majors on campus **it also** targets adult learners that have interest in shifting careers or need additional skills to excel in their workplace. With its certificate structure and focus on career retraining, it has the capacity to recruit new non-traditional students to WKU.

Data provided to WKU by the consulting firm Gray Associates show Graphic Design as a growth area for WKU. According to Gray, student demand regionally for graphic design programs is high. National data show high student demand, and high student employment following graduation with a graphic design degree.

Initially, there will be no additional costs for the graphic design certificate program. Growth beyond initial projections could require additional faculty and equipment resources, which would be supported by revenue generated through the decentralized budget model.

Enrollment projections reported are likely at the low end of what will be actualized. They are based on the growth and development of a recent allied minor program in the Department of Art (Animation) and on the continued requests from on and off campus for this type of program.

THE CHRONICLE OF HIGHER EDUCATION

The Discipline That Is Transforming Higher Ed

The computer-science boom is straining colleges. But it could save some, too.



Harry Campbell for The Chronicle

By Alexander C. Kafka April 15, 2020 Premium

On a Tuesday afternoon last spring, Daniel Zhang, a junior at the University of California at Berkeley, showed up to lead his first two-hour lab section in a computer-architecture course. A teaching assistant, he expected to find maybe 25 students needing his help. Instead he was met by some 200 frenzied faces, a quarter of the lecture course's enrollment.

The pattern continued. "There would be a line of people stretched around the corner through the corridors waiting to get checked off," he says, "as well as people sitting on the floors inside the lab itself."

"I started really getting the sense that this is insane."

Insane, maybe, but similar scenes play out in colleges across the country. Zhang is one of an army of undergraduate and graduate-student TAs who help thousands of Berkeley computer-science students navigate the hugely popular and hypercompetitive major. The number of computer-science majors there increased from 1,116 in 2009 to 3,387 in 2019. Nationally, since 2007, as some fields in the humanities and social sciences have withered, the number of computer-science majors has more than quadrupled.

Even that vastly understates the enrollment pressures, because departments face huge additional demand from nonmajors. This spring at Berkeley, 3,847 students are majoring in related data-science fields, and 705 students in unrelated majors are enrolled in three lower-division computer-science courses.

"It's just a phenomenal level of growth that is unprecedented in our discipline," says Stuart Zweben, a professor emeritus of computer science at Ohio State University who has led key studies of enrollment in the field. His research suggests that nationally, more than 300,000 undergraduates are enrolled in, or preparing for, computer-science majors. Students in related fields — among them cybersecurity, bioinformatics, robotics, and computer animation — lean on courses offered by computer-science departments. To get a sense of scale, visualize a couple of moderately large cities populated by nothing but computer-science students.

Advertisement

The popularity would seem like manna from admissions heaven, but it also creates problems. Most departments can't recruit nearly enough faculty members, because of budget constraints and competition from industry. The scramble to gain entry into the capped-enrollment programs puts low-income, underrepresented-minority, and female students at a disadvantage. And the increasing tilt toward tech curricula creates frictions with other disciplines.

But in the face of a Covid-19-induced recession and the enrollment cliff forecast for 2025, the boom also creates intellectual and business opportunities for colleges. Adequately funded, computer-science programs could be an even more powerful recruitment draw than they already are. Increasingly sophisticated cross-fertilization with other fields could transform waning majors from competitors into allies. And in a society increasingly based on machine learning, a nuanced understanding of automation's potential, as well as its limits, could better prepare graduates for careers not just in STEM but also in the social sciences and the humanities.

The challenge, says Katherine S. Newman, interim chancellor of the University of Massachusetts at Boston, will be to include a diverse pool of students in "what is probably the most profound intellectual revolution of our time."

Students and professors alike say that the initial appeal of computer science most often is the prospect of a lucrative career. Not only can top graduates from elite programs get entry-level software-engineering or similar jobs with six-figure salaries, signing bonuses, and superb benefits, but along the way they can lasso summer internships paying \$7,000 or \$8,000 a month, with housing allowances ranging from \$6,000 to \$9,000, says Ed Lazowska, a professor in the Paul G. Allen School of Computer Science & Engineering at the University of Washington.

Career opportunities aside, on an intellectual level computer science has become fundamental to almost every aspect of society. "You want to know why the sky is blue and how a light bulb works," says Robert Sedgewick, a professor and founding chair of computer science at Princeton University. "You should know how the internet works, too."

The Covid-19 crisis has only underscored how essential computer technology is. The discipline touches nearly every aspect of the response — epidemiological tracking, molecular modeling in vaccine research, 3D printing of medical supplies, shifts to online work and classes. Online teaching tools pioneered by necessity in computer science may now, however flawed, point the way for distance-learning innovations in other fields. And data tracking and measurement of the results of those teaching methods will help to evaluate and refine them.

"Even if you never write a line of code," says Sedgewick, computer science "is a way of logical thinking that will serve you well in addressing a variety of situations."

Most scholars in the field, and many outside it, believe computer science should be part of every student's education, like expository writing or a math, statistics, or foreign-language course. When demand is so high that some colleges hold [lotteries](#) for enrollment in these classes, the notion of a "requirement" seems almost beside the point. Students are increasingly requiring it of themselves. But an intro course, at least, should be available to all, Sedgewick says.

At Princeton, about 70 percent of undergraduates take Sedgewick's introductory course, "Computer Science: An Interdisciplinary Approach." The proportion used to be around 80 percent, he says, but now a growing number of students place out after taking good high-school or online courses. Forty percent of the undergraduates take Sedgewick's course on algorithms, and 25 percent of all Princeton students major or earn a certificate in computer science.

But, he says, "many colleges do not even aspire to reach those levels."

Advertisement

In part, that's because there aren't nearly enough faculty members to keep up with demand. Among universities responding to a Computer Research Association survey in 2016 of Ph.D.-granting institutions, from 2006 to 2015 the number of computer-science majors increased

almost fourfold (from an average of 192 students to 753) while growth in tenure-line faculty grew by only 22 percent (from an average 23 to 28).

The enrollment surge has continued since then, says Craig E. Wills, who heads the computer-science department at Worcester Polytechnic Institute and tracks hiring in the field. Over the past three years, however, new tenure-track positions for computer-science faculty peaked and have remained steady.

Faculty salaries can't compete with industry pay, which can be several times higher and is often accompanied by excellent benefits. So great is the need for faculty members, says Dan Garcia, a teaching professor in Berkeley's computer-science department, that some colleges are filling full-time teaching positions with candidates who have a four-year bachelor's degree and a one-year master's.

The sparse faculty ranks are supplemented by armies of teaching assistants. Berkeley's computer-science classes and combined electrical-engineering and computer-science courses together employ 444 TAs. In decades past, Garcia says, he'd try to learn the names of all of his students, but now he has trouble learning the names of all of his teaching assistants. Instructors have become more like generals now, he says, overseeing, for a single course, dozens of TAs. The scale is such that the assistants have become specialists, with niche skills in creating tests, grading, running labs, or tutoring.

These battalions cost millions of dollars. Unions argue that colleges are getting off cheap — too cheap. An arbitrator in January [ruled](#) that Berkeley must stop employing TAs for less than the 10-hour weekly threshold at which they would contractually receive partial tuition reimbursement and other benefits. The ruling also awarded them a collective \$5 million in back pay. Some TAs, at least the undergraduates, worry that such rulings will force departments — and not just at Berkeley — to shrink their TA programs, denying students valuable teaching experience.

Department heads say they're caught in the middle. The University of Washington's computer-science program employs 590 TAs, 470 of whom are undergraduates. The undergrads earn a stipend that works out to \$16 to \$20 an hour, says Lazowska. Waiving tuition, he says, would cost roughly \$5.7 million, "a staggering number that would more than double our annual TA costs."

Advertisement

As it is, he says, "we are siphoning funds from everywhere" to pay the TAs — unrestricted gifts, vacant staff and faculty positions — a scramble for dollars that is happening at colleges across the country.

"Most of us have been pleading with our deans to grow our programs," says Berkeley's Garcia. "People are just struggling under the weight, and overworked."

Capping enrollments in computer-science majors and classes, as many colleges are doing, is not the answer, many experts argue. In fact, for students' intellectual and professional development, as well as for the sake of diversity, Sedgewick says doing so is "bordering on immoral."

Newman, of UMass Boston, was previously provost and senior vice chancellor on the Amherst campus. Before she left, in 2017, demand for computer science was so high that the university could easily have filled an entire freshman class with nothing but computer-science students. The program was turning away most applicants with grade-point averages below 3.9 (Advanced Placement courses raise the maximum GPA to 4.5). Since then the competition for computer-science spots, there and across the nation, has become only more intense.

That's a problem most departments would be thrilled to have. But it has exacerbated computer science's gender and racial imbalance. Newman, a sociologist, says training in computer science is a ticket to the upper-middle class, much as medical and law school once were. But it is out of reach for many women and underrepresented minorities.

Advertisement

On average, reports from the National Academy of Sciences and elsewhere show, women account for only about a fifth of computer-science students. And while Asians and Asian-Americans are well represented, African American, Hispanic, and Native American students, collectively, make up roughly just 16 percent. Educators blame, among other factors, disparate preparation and resources at the K-12 level, cultural stereotypes about and within the field, and an imbalance in types of role models.

The percentage of female students has inched up in the past several years, but the percentage of underrepresented minorities hasn't. While the federal government, through the National Science Foundation, has significantly subsidized training in cybersecurity, Newman says, a broader effort is needed.

Some college leaders tell computer-science department heads that continued rapid growth in the programs would be unfair to other disciplines competing for tenure lines, and lab, office, and classroom space. They also worry that the surge is temporary, similar to the enrollment bubble in the mid-1980s after personal computers took off, or the bubble around 2005 after the dot-com boom.

The program directors understand that apprehension — a new tenure line is, after all, a 30- or 40-year commitment — but they think the fears are ill-founded. That's because high tech in the past decade has been woven into every industry.

An influential 2018 [report](#) by the National Academy of Sciences cites data from the Bureau of Labor Statistics showing that "employment in computer occupations grew by nearly a factor of 20 between 1975 and 2015," almost twice as fast as bachelor's degrees in the field. Demand will continue to grow, the federal figures suggest. "It doesn't look like a bubble," says Jennifer Hunt, a professor of economics at Rutgers University at New Brunswick who has studied this market.

And program expansion is not a zero-sum game that will happen only at the cost of other programs, says Susanne E. Hambruch, a professor of computer science at Purdue University who analyzes enrollment trends in the field. Particularly as colleges face a recession triggered by Covid-19, integrating data science into a wide variety of disciplines makes good curricular and business sense, she says. Fifteen years ago, it was mostly software companies and a few financial firms that recruited at computer-science job fairs. Now it's corporations of many types.

Princeton's Sedgewick says that once-resentful academics in other departments warmed to computer science when they saw that its courses could be tailored to the needs of their students. That's the approach many programs now take.

The University of Illinois at Urbana-Champaign offers degrees in computer science, math and computer science, statistics and computer science, and a minor in computer science. But it has also established "[CS + X](#)" programs in advertising, animal sciences, anthropology, astronomy, chemistry, crop sciences, economics, geography, linguistics, music, and philosophy.

Elsa L. Gunter, a research professor in the computer-science department, says CS + X hybrids don't work when they're dictated from on high. "We want everyone involved to know why it's desirable," she says. The hybrids generally include 11 courses in the computer-science core, at least eight in the X topic, one or two technical electives, and a course or two specifically designed for the [combined program](#).

CS + Philosophy students, for example, might prepare for a profession like intellectual-property law, learning to consider not just the technical but also the ethical aspects of an invention. The combination is organic, Gunter says. "It was philosophy that gave birth to logic that gave birth to the various foundations of computer science."

Advertisement

Colleges' next step should be to flip the order and create "X + CS" programs, says Newman, so "you've got enrollment flowing into that home discipline." That would ease other departments' resentment toward computer science and would relieve, to some extent, demand on overwhelmed computer-science departments.

"There are a lot of students out there who don't want to be computer-science majors but really do want to have data-analysis and tech skills," says Laura Haas, dean of the College of Information and Computer Sciences at the University of Massachusetts at Amherst. In the X + CS programs she and colleagues are creating for those students, "the other department owns the major," while computer science provides tailored technical skills in what might constitute 40 percent of the

coursework. In computational linguistics, for example, among the computer-science elements would be machine learning, statistics, and natural-language processing.

Combine the CS and the X in any order you like, though, and problems remain, says Princeton's Sedgewick. In some such hybrid programs, computer science isn't taught by computer-science professors. "We don't tolerate that in other disciplines," he says. Moreover, "developing multiple curricula is just plain inefficient and cannot scale to solve the problem." And many of the hybrid programs don't provide sufficient preparation for advanced courses, like those on algorithms.

What's more, professors in other departments may, at least initially, be skeptical of the role that computer science can play in their fields. In the early 2000s, scholars began to explore humanistic questions with the help of data. Christopher Warren, an associate professor of English at Carnegie Mellon University, offers some examples: Who knew whom in Shakespeare's England? What life patterns emerge through analyses of 60,000 entries — 72 million words — in the Oxford Dictionary of National Biography?

Early on, some humanists saw research projects along those lines as a techie invasion of the liberal arts. One objection was that applying quantitative approaches to humanistic matters would shortchange ethical considerations. But digital humanists have internalized such concerns, and ethics has become integral to their work, says Warren. Now the digital humanities have become mainstream. He points to his university's minor in ["humanities analytics"](#) as an example.

There are still skeptics. Mark Bauerlein, editor of the journal *First Things* and an emeritus professor of English at Emory University, says some humanities scholars "enjoy the energy that comes with an alliance with computer science, but most professors won't. They have neither the equipment nor the disposition to do so."

Whether or not humanists are ready for the technological convergence, it is well under way, says Brian Christian, a visiting scholar at Berkeley and author of the forthcoming book *The Alignment Problem: Machine Learning and Human Values*. In the past few decades, he says, machine-learning systems have become elemental to technology, and technology has become elemental to society.

He cites a controversial recent California bill, SB 10, which seeks to eliminate cash bail and to use algorithmic software to quantify the risk of a suspect's fleeing or committing an offense while awaiting trial. Christian has studied the algorithms' inherent biases, their inability to recognize outlying factors in suspects' circumstances or behavior. When he watched judges at arraignment hearings, he says, "the impression that I got was very much that no one knew what the score meant or how it was generated."

Or consider dermatologists who rely on computer analyses that show 99-percent confidence that a skin discoloration is not a malignancy. How and when should doctors weigh experience-based judgments against technology's predictions?

Students who are "age 18 or 19 today cannot avoid the fact that their job will put them in contact with machine learning on an almost daily basis," Christian says. Engineers will have to realize

that the tools they design must mesh with the messiness of society — and society, in turn, will have to understand the limits of those tools.

"We need everyone fluent in computing and technology," says Berkeley's Garcia, "so that they're not just passive users of it but active creators of it."

"Computing," he says, "is the literacy of the 21st century."

Audrey Williams June created the graphics for this article.

Alexander C. Kafka is a Chronicle senior editor. Follow him on Twitter [@AlexanderKafka](#), or email him at alexander.kafka@chronicle.com.

Audrey Williams June, the news data manager, explores and analyzes data sets, databases, and records to uncover higher-education trends and insights. Contact her at audrey.june@chronicle.com, or follow her on Twitter [@chronaudrey](#).

Related Content

- [A Computer-Science Program Takes a Dramatic Approach to Getting Students to Open Up](#)
- [The Campus Innovation Myth](#) Premium
- [Computer Science, Meet Humanities: in New Majors, Opposites Attract](#)

**PARALEGAL STUDIES
UNDERGRADUATE CERTIFICATE**

REQUEST: Approval of an Undergraduate Certificate in Paralegal Studies offered through the Potter College of Arts and Letters.

FACTS: Traditionally, an associate's degree from WKU's Paralegal Program has been the entry-level degree required by most employers in our region. As disclosed in the program Comprehensive Academic Program Evaluation (CAPE) report, that market trend is changing. Currently, most students enrolled in the associate degree option hold first degrees in other disciplines and are seeking an affordable and efficient resource for workforce advancement or transition.

The National Center for Education Statistics found from 2000–01 to 2015–16, the number of certificates below the associate's level conferred by public institutions increased by 99 percent (from 310,000 to 615,000). The paralegal profession will grow quickly through 2026 as projected by state and national employment experts, and a certificate would help meet this employment growth projection in an expedient fashion and may overcome barriers to higher education for the non-traditional student population.

BUDGETARY IMPLICATIONS& IMPLEMENTATION DATE: All required and elective courses exist within the paralegal studies portfolio and are offered according to an established course rotation with full-time and part-time faculty assignments. No additional resources are needed at this time. Implementation will be Fall 2020.

RECOMMENDATION: President Timothy C. Caboni recommends approval of an Undergraduate Certificate in Paralegal Studies with implementation Fall 2020.

MOTION: Approval to establish an Undergraduate Certificate in Paralegal Studies effective Fall 2020.

**Potter College of Arts and Letters
Department of Political Science
Proposal to Create a New Certificate Program (Action Item)**

Contact Person: Julie Shadoan, julie.shadoan@wku.edu; (270) 780-2539

1. Identification of program:

- 1.1. **Program title:** Certificate in Paralegal Studies
- 1.2. **Required hours in program:** 21
- 1.3. **Special information:** N/A
- 1.4. **Catalog description:** This pre-professional certificate combines legal theory and professional skills preparing graduates for immediate employment or advancement within the field. It requires completion of 15 hours of legal specialty core courses and 6 hours of legal specialty course electives as follows:

Legal Specialty Core Courses: (15 hours)

Course Prefix/Number	Course Title	Course Hours
PLS 225	Introduction to Law	3
PLS 200	Legal Ethics	3
PLS 250	Legal Research/Writing I	3
PLS 291	Criminal Law/Procedure	3
PLS 393	Civil Procedure	3
TOTAL CORE		15

Legal Specialty Elective Courses: (6 hours)

Course Prefix/Number	Course Hours
Choose from any 2 PLS courses not listed in the Core	6
TOTAL ELECTIVES	6

- 1.5. **Classification of Instructional Program Code (CIP):** 22.0302 – Legal Assistant/Paralegal

2. Learning outcomes of the proposed certificate program: Upon successful completion of this certificate, students will be able to:

- Demonstrate an understanding of the paralegal profession and the ethical restrictions of practice;
- Communicate effectively within the standards of practice;
- Apply concepts of substantive law and procedure;
- Execute effective legal research strategies;
- Critically construct legal argument;
- Practice with sensitivity and recognition of cultural and socioeconomic differences; and,
- Demonstrate the importance of public service and community engagement.

3. Rationale:

- 3.1 **Reason for developing the proposed certificate program:** Traditionally, an associate’s degree from WKU’s Paralegal Program has been the entry-level degree required by most employers in our region. As disclosed in the program CAPE report, that market trend is changing. Currently, most students enrolled in the associate degree option hold first degrees in other disciplines and are seeking an affordable and efficient resource for workforce advancement or transition.

The National Center for Education Statistics found from 2000–01 to 2015–16, the number of certificates below the associate's level conferred by public institutions increased by 99 percent (from 310,000 to 615,000).

The paralegal profession will grow quickly through 2026 as projected by state and national employment experts, and a certificate would help meet this employment growth projection in an expedient fashion and may overcome barriers to higher education for the non-traditional student population.

- 3.2. **Relationship of the proposed certificate program to other programs now offered by the department:** There are no other certificate programs offered within the Political Science department. The Certificate in Political Communication has been/will be suspended. It is anticipated that this proposed certificate would provide a legal theory and skill-based enhancement to other programs in the department that prepare students for employment within various fields including law, politics, and public administration. The proposed certificate has similar objectives to the associate's degree in paralegal studies, but a proposal to suspend the associate's degree program has been submitted. This certificate would replace the associate's degree with a more efficient and focused route to employment and/or advancement within the field.
- 3.3. **Relationship of the proposed certificate program to certificate programs offered in other departments:** There are no similar certificate programs offered at WKU; however, it is anticipated that this proposed certificate would provide a legal theory and skill-based enhancement to other programs that prepare students for employment within various fields including law, politics, public administration, business, real estate, health care and many others.
- 3.4. **Projected enrollment in the proposed certificate program:** 25.
- 3.5. **Similar certificate programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions):** Certificates in paralegal studies are offered at two Kentucky institutions: Eastern Kentucky University and Sullivan University. Many other institutions within the American Association for Paralegal Education national network offer certificates in conjunction with baccalaureate degrees.
- 3.6. **Relationship of the proposed certificate program to the university mission and objectives:** The mission of the Paralegal Studies Program is to engage students in the scholarly pursuit of the law and its practice. The Program is committed to provide students with knowledge of procedural and substantive law and a professional skill set that will prepare them for employment in a changing and competitive legal environment.

The mission statement of the Paralegal Program is reflective of the University and College statements in that it focuses on academic quality and student engagement while providing practical skills that will transition the student to the workplace or provide advancement within existing employment. The focus will be on research, writing, analysis and application through curriculum approved by the American Bar Association and administered by practicing attorneys in the community.

4. Curriculum:

Legal Specialty Core Courses: (15 hours)

Course Prefix/Number	Course Title	Course Hours
PLS 225	Introduction to Law	3
PLS 200	Legal Ethics	3
PLS 250	Legal Research/Writing I	3
PLS 291	Criminal Law/Procedure	3
PLS 393	Civil Procedure	3
TOTAL CORE		15

Legal Specialty Elective Courses: (6 hours)

Course Prefix/Number	Course Hours
Choose from any 2 PLS courses not listed in the Core	6
TOTAL ELECTIVES	6

5. Budget implications: All required and elective courses exist within the paralegal studies portfolio and are offered according to an established course rotation with full-time and part-time faculty assignments.

6. Proposed term for implementation: Fall 2020

7. Prior committee approvals:

Committee	Approval Dates
Department of Political Science	11/15/2019
PCAL Curriculum Committee	02/04/2020
Undergraduate Curriculum Committee	02/25/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

**BACHELOR OF SCIENCE
ENVIRONMENTAL, SUSTAINABILITY, AND GEOGRAPHIC STUDIES**

REQUEST: Approval of a Bachelor of Science in Environmental, Sustainability, and Geographic Studies from the Department of Geography and Geology within Ogden College of Science and Engineering.

FACTS: This program is proposed as part of the WKU Comprehensive Academic Program Evaluation (CAPE), wherein the institution supported the forward thinking of the Department of Geography and Geology to transform its majors in Geography and Environmental Studies and GIS into a merged, single major. The **new program in Environmental, Sustainability, and Geographic Studies (ESGS)** will enhance student training, follow market trends, integrate high-impact learning practices, capitalize on faculty expertise and research via student-faculty engagement, and streamline the current majors in various concentrations within the degrees undergoing transformation. This will make advising and programming more efficient for majors and also provide them with a degree that integrates the skills and topics that are necessary and relevant to today's workforce demands. The program not only will prepare students with essential knowledge in the fields of environment and sustainability, but will also train students with critical information processing and geospatial analysis skills to meet the demands of employers in diverse industries with information-age needs in the 21st Century.

BUDGETARY IMPLICATIONS: Given that this is a merger of two existing programs, there are no pertinent budget impacts; however, the budgetary rationale for creating this new program is to promote efficiencies and effectiveness of instructor resources within the Department of Geography and Geology and Ogden College at WKU. Implementation is Fall 2020.

RECOMMENDATION & IMPLEMENTATION DATE: President Timothy C. Caboni recommends approval of the Environmental, Sustainability, and Geographic Studies major leading to the Bachelor of Science with implementation Fall 2020.

MOTION: Approval to establish a major in Environmental, Sustainability, and Geographic Studies effective Fall 2020.

**Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Create a New Undergraduate Major
(Action Item)**

Contact Person: Dr. Fred Siewers, Associate Professor and Chair

Fred.Siewers@wku.edu, 270-745-5988

1. Identification of program:

1.1 **Program title:** Environmental, Sustainability, and Geographic Studies

1.2 **Required hours in program:** 53

1.3 **Special information:** This program is proposed as part of the WKU comprehensive program review (CAPE), wherein the institution supported the forward thinking of the Department of Geography and Geology to transform its majors in Geography and Environmental Studies and GIS into a merged, single major.

1.4 **Catalog description:** The Environmental, Sustainability, and Geographic Studies program will focus on environment-related issues using scientific, technological, and humanistic approaches to understand the interactive nature and interdependence of environmental and human factors. The proposed program is structured around foundational courses, technical course work, and applied, high-impact real-world experiences. Foundational instruction introduces students to basic principles of environmental science and related subjects, such as sustainability science, environmental planning, pollution control, natural resource management, spatial data analysis, economics, cultural geography, and the general interactions of humans and nature. The foundational courses will provide students with common intellectual experiences via integrative approaches so students can accumulate solid foundational knowledge and prepare them to learn effectively technical, analytical, and applied skills essential to job demands in the geoenvironmental sectors.

The program will prepare students for thinking critically about the complexities of human-environmental interactions through technical course work encompassing scientific writing, quantitative skills and data analysis, applied field- and lab-based experiences (including internships, study abroad, community service, collaborative assignments and research, capstone projects), and effective use of geospatial technologies (e.g., GIS and cartography, GPS, radar, satellite, drone, photogrammetry, environmental quality monitors, and surveying). Since the geoenvironmental sector is very broad in scope, the major does not include pre-defined and narrow concentrations. Instead, the program will allow students to complete a customized set of elective coursework that best prepares them for a graduate program or any one of the wide-ranging careers in the environmental field that they find of most interest. The customized nature of the program will enhance student-faculty interactions and engagement in all stages of student advising, especially in early advising, to meet evolving needs of students and ever-changing market demands both regionally and nationally.

1.5 **Classification of Instructional Program Code (CIP):** 03.0103 – Environmental Studies

2. Learning outcomes of the proposed program: The specifics of these broad learning outcomes for the Environmental, Sustainability, and Geographical Studies program can be divided into three broad categories and are aligned with Bloom's Taxonomy for learning outcomes which are also listed below.

Student Learning Outcomes – Foundational Required Courses (Define/Describe)

The foundational courses provide students with common intellectual experiences via integrative approaches so students can accumulate solid foundational knowledge and prepare them to effectively learn technical, analytical, and applied skills essential to job demands in the geoenvironmental sector. Students will demonstrate engagement with the fundamental principles of environment, sustainability, and human geography to develop discipline-specific knowledge and skills within the program of study. Students will learn how the concepts such as place, scale, region, and diffusion, which make up an environmental geographer's 'toolkit', can be used for identifying, mapping, and quantifiably analyzing environmental data and geospatial patterns of human and natural environments, as well as the interaction between the two. Students will be able to articulate the pillars of sustainability as they relate to the individual, community, and world.

1. Articulate basic environmental concepts, sustainability pillars, and geographical principles and convey an understanding of their value and importance to stakeholders and the public.
2. Compare and contrast circumstances from place-to-place and within different environmental conditions to recognize how actions and policies can predict outcomes.

Student Learning Outcomes – Technical Required Courses (Method)

The required technical and professional courses engage students with many hands-on high impact learning opportunities, which not only provide students with many opportunities to gain and accumulate real-world experiences but also facilitate further student-faculty engagement. Students will demonstrate competence in written and visual communication through research and writing experiences in the program. Students will demonstrate how qualitative/quantitative measures can be used to assess, report, and design approaches that address sustainability challenges and opportunities. Students will be able to articulate the principles of the scientific method. Within a projects-based learning model, students will be able to apply geospatial and techniques in solving real-world problems, and provide quantifiable assessment of geospatial and environmental data, as well as demonstrate operational knowledge of GIS software and geospatial analytical techniques. Furthermore, professional courses guide students through their career path by updating ePortfolios, preparing resumes, transforming skills gained through coursework to applicable workforce job qualities, honing interview skills, and guiding students through job searches that should result in a rewarding career.

3. Execute fieldwork and/or research to collect data regarding socioenvironmental problems.
4. Analyze and communicate complex datasets by integrating human and environmental variables to contextualize broader patterns, trends, and relationships within a spatial, geographical, and environmental context using GIS and other sub-discipline specific techniques.

Student Learning Outcomes – Career Emphasis Courses (Electives) (Synthesize)

Students can explain the complexities of social, cultural, and environmental diversity, and demonstrate critical thinking and evidence-based argument skills related to diverse, complex, and nuanced real-world social, cultural, environmental, and sustainability problems in geospatial and socioenvironmental contexts in preparation for their specific professional career aspirations.

5. Gain competency in applied information processing skills and geospatial analytical techniques.
6. Recognize that contemporary challenges and problem-solving requires holistic research and reflection, using knowledge and technology.

In summary, with many high impact learning opportunities in the new program, students who complete our program will be well-prepared to succeed in their chosen career paths and fully capable of applying their critical thinking skills and their technical and scientific expertise to effectively solve problems at the local, regional, and global scales. Our graduates will have the intellectual abilities and necessary scientific tools to describe, methodically analyze, and synthesize the complexities of social and environment diversity and will be well-equipped to meet emerging challenges and deploy new technologies. Students who earn their degree in Environmental, Sustainability, and Geographical Studies at WKU will have the confidence and knowledge to effect change and to enter the workforce with marketable technical and communication abilities.

3. Rationale:**3.1 Reason for developing the proposed program:**

As part of the WKU comprehensive program review (CAPE) the Department of Geography and Geology, supported by the Institution, proposed to transform the program. The transformation involves merging the Geography and Environmental Studies and GIS programs into a single major that better enhances student training, follows market trends, capitalizes on faculty expertise and research, and streamlines concentrations of the existing program. This will make advising and programming more efficient for majors and also provide them with a degree that integrates the skills and topics that are necessary and relevant to today's workforce demands. The curriculum in the new merged program is evolving to emphasize substantive issues regarding the environment, sustainability, globalization, cultural awareness, and place-based learning, while expanding opportunities and expectations for students to acquire technical skills involving the analysis and interpretation of geospatial and environmental data via applied field- and lab-based experiences. There is a growing need for people with knowledge and technical skills to analyze and understand the massive volume of geospatial and environmental data that are being collected each day to support decision-making in both the public and private sectors

3.2 Relationship of the proposed program to other programs now offered by the department:

The Environmental, Sustainability, and Geographic Studies major will support all other majors in the Department of Geography and Geology and beyond. Program coursework is inextricably intertwined with METR, GEOL, and the Master's program through JUMP. For example, GEOG 300 (*Writing in the Geosciences*) is required by all majors in any program offered through Geography and Geology. Program faculty teach across all major programs. This major will also support the certificate in Geographic Information Systems. This certificate is critical to a variety

of disciplines that involve the analysis and mapping of varying forms of geospatial data (Criminology, Biology, History, etc.). Students who complete the certificate will have a solid foundation that spans the collection, management, analysis, automation, and display of data using geospatial technologies such as GIS.

3.3 Relationship of the proposed program to programs offered in other departments: In consultation with an advisor, students will be able to take courses in other departments such as Biology, Criminology, Chemistry, or Public Health to fulfill elective options. The major will support other programs across the institution. For example, a student majoring in Photojournalism or Business can pursue electives in this major to give them background in environment or sustainability, or they can pursue it as part of a double major or as a second degree. Because of the interdisciplinary nature of the program, and the high demand for the applied skills taught through its coursework, students from multiple colleges and departments (such as education, agriculture, political science, criminology, journalism, history, social studies, engineering, and biology, etc.) may participate in our program courses.

3.4 Projected enrollment in the proposed program:

Year 1 (Fall 20/Sp 21)	Year 2	Year 3	Year 4	Year 5
40	56	65	74	85

**enrollments in Year 1 reflect students new to major and an estimated portion of existing students in old majors who will likely switch to the new degree program. A 20% retention loss (average for WKU) is calculated into the estimates, though retention rates in our Department have traditionally been higher than the University average. Students graduating from the program are also calculated into the estimates. Students who transfer into the major (from undeclared AND from other majors) are also calculated into these projections. Students from other majors ARE NOT calculated into budget documentation submitted with this application since those students are not new revenue to WKU.*

3.5 Similar programs offered elsewhere in Kentucky and in other states (including programs at benchmark institutions): Western Kentucky University, through the Environmental, Sustainability, and Geographic Studies program, will offer the only undergraduate degree program in the region with an integrated specialization in environmental sciences, sustainability science, human geography, and geospatial science in a single degree program. There are similar programs with a specialization in individual subsets in those disciplines, but no program will equip students with them all; thus, our combined environmental studies, sustainability science, human geography, and GIS program will be distinctively different from the geography and/or environmental science or studies programs at other state-supported institutions such as the University of Kentucky (UK), University of Louisville (UL), Eastern Kentucky University (EKU), Northern Kentucky University, and Murray State University. Additionally, since the proposed program is a merger of existing programs in geography and environmental studies and GIS taught at WKU, other programs in Kentucky and those at WKU have historically coexisted and served geographically different populations. With the projected growth in the sectors covered by the degree programs, there is no reason to believe that the program proposed herein and other like programs across the state can't continue to serve students in the western Kentucky region.

For example, since the program at UK is a relatively new B.A., and our program is designed as a B.S. degree, our major will allow for the integration of coursework that expands beyond the social aspects of environmental studies covered in the B.A. program at UK. The Environmental Studies program at ECU is housed in the Department of Biological Sciences and offers a more generalized program related to the environment with a focus on biological sciences, wherein

students must also take courses across multiple departments to meet degree requirements. Our program, by comparison, is designed to be more focused in the environmental geosciences and integrates geospatial analysis (GIS) and sustainability concepts, which are completely separate and intensive aspects that provide students with a richer experience related to the human-environmental systems interaction and data-driven management aspects of these fields. The curricula have minimal overlap in course themes between the two programs and our B.S. is designed to be custom tailored to students seeking more interdisciplinary training outside of just the physical and biological sciences in order to be marketable for a broader range of jobs. The UL program focuses primarily on sustainability pedagogy, whereas sustainability is but one of the pedagogical fields covered in the proposed WKU major. Although the Murray State program also leads to a B.S. degree, students in this major identify distinct tracks with coursework focused on that track area. Environmental Science and Geography and GIS are two separate tracks at Murray State, whereas our program will require students to take courses in each of these areas (similar to at Murray), but then will have the opportunity to take 26 hours of custom-designed elective coursework that best meets their interest and future academic and professional goals within any of those areas. Lastly, NKU has a B.S. program that focuses heavily on the physical sciences (biology, geology, and physics) and a B.A. program that focuses heavily on social science and cultural courses. Students in our program will complete coursework that will cover both physical and cultural aspects of the environment and geosciences, while also integrating geospatial analysis (GIS) and sustainability concepts.

In addition to combining content areas not combined in this manner elsewhere in the state, the major proposed herein applies a ‘custom-design’ strategy, which will allow majors to build a set of elective coursework to prepare them for their specific career goals within the very diverse environmental sector. As one example, students in our program at WKU have the opportunity to specialize in cave and karst tourism studies, which combines analytical skills with applied practices in the areas of human and environmental geography. No other similar program in Kentucky can make that claim. These qualities will make this WKU program unique in the educational opportunities extended to undergraduates in Kentucky. We will provide students with a highly specialized educational experience that is easily applied to real-world problem solving. Finally, through leveraged research center partnerships at WKU and the expertise of our faculty, our program will offer students study abroad experiences and opportunities in international partnerships (such as those with the Caribbean Community Climate Change Centre) that are not comparable to any experiences offered through other Kentucky institutions. In summary, the program proposed herein will offer students a unique educational and professionalizing experience; we will provide students with a highly specialized educational program that is easily applied to real-world problem solving.

- 3.6 Relationship of the proposed program to the university mission and objectives:** The mission of WKU is “to prepare students of all backgrounds to be productive, engaged, and socially responsible citizen-leaders of a global society. The University provides research, service and lifelong learning opportunities for its students, faculty, and other constituents. WKU enriches the quality of life for those within its reach.” Productive citizens have the ability to adapt to a changing world and often rise to become leaders in their communities. Processes of globalization, reflected by technological innovation and cultural diffusion, are drivers of rapid change in the structure of society. At the same time, issues of sustainability challenge society from the local to

the global scale to keep pace with resource utilization and management. Now, more than at any time, an informed geographic perspective is an asset in society. Further, there is a growing need for people with knowledge and technical skills to analyze and understand the massive volume of geospatial and environmental data that are being collected each day to support decision-making in both the public and private sectors. The B.S. in Environmental, Sustainability, and Geographic Studies program is focused specifically on providing students with an educational experience that meets their needs and those of society. The curriculum in the new merged program will evolve to emphasize substantive issues regarding the environment, sustainability, globalization, cultural awareness, and place-based learning, while expanding opportunities and expectations for students to acquire technical skills involving the analysis and interpretation of geospatial and environmental data via applied field- and lab-based experiences.

The subdisciplines of sustainability and environmental studies are concerned with understanding the complexities of human-environment interactions through applied learning and a holistic approach, similar to geography and its global approach. The Environmental, Sustainability, and Geographic Studies program aims to be the region's outstanding geoenvironmental program by incorporating geographic information skills as a tool to assist our students in decision-making processes in the Kentucky workforce and beyond. It aims to produce exceptional undergraduates through engagement in critical-thinking and meaningful problem-solving using a systems-based approach. There are many opportunities for students in the program to get out of the classroom and aid in solving real-world problems through involvement in field research, internships, and applied learning activities. This program will incorporate meaningful research and community engagement in its courses and in the overall program.

The proposed program complements other majors in the Department (Meteorology and Geology), as well as the Master's program (through the Joint Undergraduate-Masters Program or JUMP) via common core courses and strong interdisciplinary training, creating synergies that enhance both the student experience and retention. Because of the interdisciplinary nature of the program, and the high demand for the applied skills taught through its coursework, students from multiple colleges and departments (such as education, agriculture, political science, criminology, journalism, history, social studies, engineering, and biology, etc.) participate in our program courses. Additionally, since every education major at WKU must take a Geography of Kentucky or History of Kentucky course to complete the degree, approximately 100 elementary education majors annually are able to graduate WKU because of our program coursework.

4. Curriculum:

Program Core Courses (32 Credit Hours)

Prefix & Number	Course Title	Credit Hours
GEOG 103 or GEOL 111 or METR 121	Our Dynamic Planet The Earth Intro to Meteorology	3
GEOG 110	World Regional Geography	3
GEOG 280	Intro to Environmental Science and Sustainability	4

GEOG 380 or GEOG 480	Global Sustainability Sustainable Cities	3
GISC 316	Fundamentals of GIS	4
GISC 317	Geographic Information Systems	4
GEOG 391	Spatial Data Analysis	4
GEOG 300	Writing in the Geosciences	3
GEOG 499	Professional Preparation	1
GEOG 452 or GEOG 495 or GEOG 475	Applied Geoscience Field Experiences (Study Abroad) Research Practicum or Internship Specialty Course	3

Elective Courses (21 credit hours)

Prefix & Number	Credit Hours
*any GEOG, GISC, METR, or GEOL 200-400 level course with advisor approval. Up to six hours may be taken outside of the geoscience discipline with advisor approval.	21 total, at least 9 hours must be upper-level
TOTAL HOURS FOR MAJOR:	53

* To align with the custom-design structure of this program, no predetermined electives will be listed in the major. Instead we propose the following language: “Elective coursework selected from any GEOG, GISC, METR, or GEOL 200-400 level course with advisor approval. Up to six hours may be taken outside of the geoscience discipline with advisor approval. At least 9 hours must be at the upper-level.” This structure will allow students to build a set of elective coursework that prepares them for their specific professional careers within the board environmental sector.

5. Budget implications: Given that this is a merger of two existing programs, there are no pertinent budget impacts; however, the budgetary rationale for creating this new program is to promote efficiencies and effectiveness of instructor resources within the Department of Geography and Geology and Ogden College at WKU.

6. Proposed term for implementation: Fall 2020

7. Dates of prior committee approvals:

Committee	Date
Department of Geography and Geology	11/22/2019
College of Science and Engineering Curriculum Committee	12/05/2019
Undergraduate Curriculum Committee	01/21/2020
University Senate	03/19/2020
Provost	03/26/2020
Board of Regents	

UNIVERSITY DISTINGUISHED PROFESSOR APPOINTMENTS

REQUEST: Approval of University Distinguished Professor appointment for Dr. Rodney King, Professor of Biology, and Ms. Yvonne Petkus, Professor of Art, effective July 1, 2020.

FACTS: Following a review of nominations, below are faculty members who have been recommended by the University Distinguished Professorship Selection Committee and the Provost to be awarded University Distinguished Professor status effective July 1, 2020.

Professor Rodney King

Since joining WKU in 2002, Professor Rodney King has exuded collegiality. He is the consummate team-player who always has students at the forefront of his mind. Professor King teaches graduate and undergraduate courses to majors and nonmajors, including the popular Fermentation Biology. He spends a great deal of time assisting students in their learning process and works diligently to keep his courses current, conceptually challenging and interesting. Professor King has received the Kentucky Academy of Science (KAS) Distinguished Teaching Award (2014), the WKU Undergraduate Mentoring Award (2017), and the Alpha Delta Pi award for best professor (2019). Professor King oversees the Biology Student Ambassadors, organizes public relations events, and assists with advising assignments. In general, he is a wonderful promoter of and advocate for the Department of Biology. Beyond his organizational work at the national, university, and department levels, he has demonstrated an ability to work endlessly with students in the classroom and the laboratory.

Professor King's distinguished skill as a professor is demonstrated through his ability to not only clearly and concisely explain complex virology material, but also through his innate skill to individually tailor instruction to students. As a lecturer, Professor King has developed rigorous and enjoyable courses that detail critical topics in virology and microbial pathogenesis for both future clinicians and researchers alike. As a mentor, Professor King routinely works closely with the Mahurin Honors College and the Office of Scholar Development to assist students in their development as researchers, thinkers and young professionals who successfully obtain competitive scholarships such as Goldwater, Fulbright, Truman in addition to the NIH Oxford-Cambridge Scholars Award, the NSF Graduate Research Fellowship, the National Defense Science and Engineering Grant, the Fulbright Grant, and finalist status in the Rhodes, Marshall, Gates Cambridge, and Truman Scholarship competitions. This success grew out of Professor King's deep commitment to his students. Professor King enjoys teaching at both the undergraduate and graduate levels and has become an inspiration and a trusted mentor to students. He is certainly deserving of the University Distinguished Professor appointment.

Professor Yvonne Petkus

Since her arrival at WKU in 2000, Professor Petkus has excelled in every area of faculty responsibility. She is an accomplished and sought-after instructor. Students praise her attention and care, while acknowledging her ability to push them hard in pursuit of excellence. Indeed, the artistic quality of her students' work is a visible testimony to her skill as a teacher. Likewise, her own creative activity is remarkable, both in its quality and quantity. Professor Petkus has become an internationally celebrated artist, exhibiting her paintings in venues across the globe. Her work has garnered praise and won awards

at juried shows across the country and abroad, and her service to the department, college, and university continues to be outstanding. She has quietly become a faculty leader on campus through sustained service to her students and colleagues. Whether serving on the University CAPE Committee or mentoring junior colleagues compiling their tenure portfolios, Professor Petkus demonstrates a commitment to collegiality and professionalism that is a model for the professorate. She is a person of sound judgment and character, creative, student-focused, and a colleague whose voice is respected and trusted.

Professor Petkus is distinguished in the field because of the high quality of her painting, success exhibiting her work widely, scholarship, and curatorial work. All of these activities are founded upon her admirable ability to maintain a disciplined studio practice as an artist. She organically developed layers of dimension within her professional profile and received numerous recognitions and awards for visual works in competitive exhibitions with her work selected and recognized by very prestigious jurors such as Robert Rosenblum. She is certainly deserving of the University Distinguished Professor appointment.

RECOMMENDATION: President Timothy C. Caboni recommends University Distinguished Professor appointment for Dr. Rodney King, Professor of Biology, and Ms. Yvonne Petkus, Professor of Art, effective July 1, 2020.

MOTION: Approval of University Distinguished Professor appointment for Dr. Rodney King, Professor of Biology, and Ms. Yvonne Petkus, Professor of Art, effective July 1, 2020.