

Identification of Critical Teacher Shortage Areas for 2021-22

Recommended Critical Teacher Shortage Areas

This report identifies which certification areas represent the greatest need among teachers statewide. Using the information provided below, the recommended critical teacher shortage areas for the 2021-22 school year are as follows:

- Science-General
- English
- Exceptional Student Education (ESE)
- Science-Physical
- Reading
- Technical Education
- Science-Earth & Space
- English for Speakers of Other Languages (ESOL)
- Math

The shortage areas above represent certification areas where substantial proportions of teachers who are not certified in the appropriate field are being hired to teach such courses, where significant vacancies exist and where postsecondary institutions do not produce enough graduates to meet the needs of Florida's K-12 student population. This information can be used to determine the current and projected needs of classroom teachers for specific subject areas in the upcoming school year. The process used to determine these critical teacher shortage areas is presented below.

Background

Section (s.) 1012.07, Florida Statutes (F.S.), requires the State Board of Education (SBE) to annually identify critical teacher shortage areas based on the recommendations of the Commissioner of Education. This statute is accompanied by SBE Rule 6A-20.0131, Florida Administrative Code, which specifies that the list of shortage areas identify high-need content areas and high-priority location areas using the following information:

1. The number and percentage of positions in each discipline filled by teachers not certified in the appropriate field;
2. The annual supply of graduates of state-approved Florida teacher education programs for each discipline;
3. The number and percentage of vacant positions in each teaching discipline; and
4. Critical teacher shortage areas which may be identified pursuant to rules adopted by district school boards. These areas shall be identified based on consideration of at least the information specified in items one through three above and submitted to the Department of Education no later than June 1st of each year.

Additionally, ss. 1012.22(1)(c)4.b. and 1012.22(1)(c)5.c.(III), F.S., include provisions requiring local school districts to incorporate critical teacher shortage areas into both their grandfathered and performance salary schedules.

Determining Shortage Areas

The critical teacher shortage areas for 2021-22 were determined using information provided in Exhibits 3 through 5. The department used the information in each of the exhibits to create rankings for each measure in Exhibit 1.¹ Rankings were then averaged across all measures to produce the final rankings.

In Exhibit 1 below, the shaded and bolded subject fields indicate the recommended 2021-22 Critical Teacher Shortage Areas. The final column in Exhibit 1, “Final Rank,” shows that Science-General was in first place with an average rank of 7.33. English was ranked second, followed by ESE, Science-Physical, Reading, Tech Education, Science-Earth & Space, ESOL, and Math as critical teacher shortage areas.

Exhibit 1 – Summary of Critical Teacher Shortage Rankings for 2021-22

Certification Areas	Rank Based on % of Courses Taught by Teachers Not Certified in the Appropriate Field for the Course (as reported by school districts)	Rank Based on Projected Vacancies (as reported by school districts)	Rank Based on % of Completers (as reported by teacher preparation programs)	Average Rank	Rank	Final Rank
Science-General*	6	6	10	7.33	1	1
English	2	4	22	9.33	2	2
ESE*	1	2	26	9.67	3	3
Science-Physical*	5	12	12	9.67	3	3
Reading*	3	8	20	10.33	5	5
Tech Education	8	22	1	10.33	5	5
Science-Earth & Space	7	24	1	10.67	7	7
ESOL*	4	11	18	11	8	8
Math	10	3	21	11.33	9	9
Business Education	14	23	1	12.67	10	
Educational Media Specialist	16	24	1	13.67	11	
Foreign Languages-Other	11	31	1	14.33	12	
Physical Education	22	15	10	15.67	13	
Science-Biology	19	13	16	16	14	
Early Childhood/Preschool	14	20	15	16.33	15	
Pre-K/Primary Education	19	5	25	16.33	15	
Computer Science	24	26	1	17	17	
Drama	23	27	1	17	17	
Foreign Languages-Spanish	25	18	8	17	17	
Elementary Education	29	1	27	19	20	
Foreign Languages-French	17	32	8	19	20	
Art	26	19	14	19.67	22	
Social Sciences	27	9	23	19.67	22	
Agriculture	17	30	13	20	24	

¹ The rankings order the data with 1 being the subject area that shows the most need for additional teachers. For example, when looking at Exhibit 5, the subject area with the fewest program completers would be ranked as number 1, but for Exhibit 4, the subject area with the most vacancies would be ranked as number 1. In the case of a tie, all subject areas in the tie are assigned the rank indicating a higher need for additional teachers. For example, if three subject areas tie for third place (i.e., there is no way to distinguish between third, fourth and fifth place), they would all be assigned third place.

Certification Areas	Rank Based on % of Courses Taught by Teachers Not Certified in the Appropriate Field for the Course (as reported by school districts)	Rank Based on Projected Vacancies (as reported by school districts)	Rank Based on % of Completers (as reported by teacher preparation programs)	Average Rank	Rank	Final Rank
Music	28	14	24	22	25	

Notes: Certification areas that were missing data in one or more of the measures examined were not ranked and excluded from the exhibit. Bolded subject fields indicate 2021-22 Critical Teacher Shortages.

* Science-General includes Science and General Science; Science-Physical includes Chemistry and Physics; ESE includes Exceptional Student Education, Speech Correction, Emotionally Handicapped, Hearing Impaired, Mentally Handicapped, Physically Impaired, Specific Learning Disabilities, Speech-Language Impaired, Varying Exceptionalities, Visually Impaired, Autism Spectrum Disorders endorsement, Adaptive Physical Education, and Orientation and Mobility endorsement; and Reading and ESOL include both the certification and the endorsement.

Information on Critical Teacher Shortage Areas

Data on teachers currently in the workforce and their areas of certification are presented below to provide context for the recommended critical teacher shortage areas. This information covers the following: certification areas in which the majority of teachers are currently certified; the number of courses taught by teachers who were not appropriately certified for the courses they were teaching; the projected number of teacher vacancies as reported by school districts; and the number of recent completers of state-approved teacher preparation programs in Florida. Additional information is provided on the number of courses being taught by teachers who were not certified in the appropriate field for the courses they were teaching in high-priority locations.² The following exhibits provide information on teacher supply and demand:

- Exhibit 2 – Number of Teacher Certifications Held by Certification Area During 2020-21
- Exhibit 3 – Number of Courses Taught by Teachers Not Certified in the Appropriate Field by Certification Area During 2019-20
- Exhibit 4 – Number of Current and Projected Vacancies by Certification Area for 2020-21
- Exhibit 5 – Number of Students Completing Teacher Education Programs During 2018-19
- Exhibit 6 – High-Priority School Locations and Courses Taught by Appropriately Certified Teachers in 2019-20

It is important to note and emphasize that all data are as reported by school districts or teacher preparation programs.

Additionally, it is important to note that due to the local, state and national response to COVID-19, all Florida K-12 public schools began online-only instruction in March 2020 and continued this type of instruction through the end of the 2019-20 school year. The department issued [Emergency Order No. 2020-EO-01](#) on March 23, 2020, which outlined the cancellation of all statewide, standardized assessments and accountability measures, including school and district grades calculations. To accommodate for the absence of the 2019-20 school grades calculations, Exhibit 6 utilizes school grades data from the 2018-19 school year, which reflect the most recent year available.

² Section 1012.07, F.S., defines high-priority locations as high-density, low-economic urban schools; low-density, low-economic urban schools; low-density, low-economic rural schools; and schools that earned a grade of “F” or three consecutive grades of “D” or below pursuant to s. 1008.34, F.S.

Exhibit 2 provides the total number of certifications held by teachers in 2020-21 by certification area. If a teacher held a certification in multiple subject areas, the certification is counted once for each subject area. The most common teacher certification area for the 2020-21 school year was Elementary Education, making up 20.68% of all certifications. This was closely followed by ESOL at 19.63%. Shortage areas for 2021-22 are shaded and bolded in the exhibit below. Following Elementary Education and ESOL, the numbers drop off with ESE making up 10.18% of certifications and Reading making up 7.70% of certifications. The nine recommended critical teacher shortage areas account for about 48.26% of all certifications (n=213,485). The complete crosswalk of “Certification Subject Codes to Certification Areas” can be found in Appendix C.

Exhibit 2 – Number of Teacher Certifications Held by Certification Area - Top Areas for 2021-22

Certification Areas	Total Number of Certifications	Percentage of Certifications
Elementary Education	91,457	20.68%
ESOL*	86,844	19.63%
ESE*	45,036	10.18%
Reading*	34,037	7.70%
Other Certification Area	23,883	5.40%
Pre-K/Primary Education	20,888	4.72%
English	18,897	4.27%
Social Sciences	18,651	4.22%
Math	17,080	3.86%
Gifted	14,223	3.22%
Physical Education	10,133	2.29%
Guidance	6,444	1.46%
Science-Biology	6,301	1.42%
Science-General*	5,991	1.35%
Foreign Languages-Spanish	5,397	1.22%
Business Education	4,695	1.06%
Music	4,565	1.03%
Art	4,185	0.95%
Educational Media Specialist	3,459	0.78%
Health	3,023	0.68%
Science-Physical*	2,948	0.67%
Early Childhood/Preschool	2,932	0.66%
Science-Earth & Space	1,728	0.39%
School Social Worker	1,651	0.37%
School Psychologist	1,488	0.34%
Family And Consumer Sciences	1,119	0.25%
Technical Education	924	0.21%
Drama	853	0.19%
Driver Education	828	0.19%
Foreign Languages-French	781	0.18%
Agriculture	656	0.15%
Computer Science	639	0.14%
Foreign Languages-Other	570	0.13%
Statewide Total	442,306	100.00%

Note: Bolded subject fields indicate 2021-22 Critical Teacher Shortages.

* Science-General includes Science and General Science; Science-Physical includes Chemistry and Physics; ESE includes Exceptional Student Education, Speech Correction, Emotionally Handicapped, Hearing Impaired, Mentally Handicapped, Physically Impaired, Specific Learning Disabilities, Speech-Language Impaired, Varying Exceptionalities, Visually Impaired, Autism Spectrum Disorders endorsement, Adaptive Physical Education, and Orientation and Mobility endorsement; and Reading and ESOL include both the certification and the endorsement.

Districts prefer to hire teachers certified in the appropriate field(s) for the courses they teach when possible to ensure students receive instruction at the level of rigor measured by statewide, standardized assessments. Exhibit 3 provides the total number and percentage of courses taught in each certification area statewide, as well as the total number and percentage of courses taught in each certification area by teachers who were not certified in the appropriate field, as reported by school districts for fall of the 2019-20 school year. The difference is calculated between the percentage of total courses reported and the percentage of total courses taught out-of-field. A large and negative difference indicates that the certification area represents a larger share of the courses taught by out-of-field teachers than it does of the overall courses offered. Students taking courses requiring certification in these areas are more likely to receive instruction from an out-of-field teacher. Certification areas are ranked in Exhibit 3 based on this difference indicating a proportionally greater need for in-field teachers.

This information provides detail on the certification areas that are currently in demand across all school districts based on how frequently courses are being taught by teachers without the required certification relative to those courses' prevalence among course offerings in Florida. ESE had the highest percentage of courses taught by teachers without the required certification relative to its prevalence among course offerings in Florida.

Exhibit 3 – Number of Courses Taught by Teachers Not Certified in the Appropriate Field, by Certification Area During 2019-20

Certification Areas	Total Number of Courses Reported Statewide	Percentage of Total Courses Reported Statewide	Total Number of Courses Taught by Teachers Not Certified in Appropriate Field Reported Statewide	Percentage of Total Courses Taught by Teachers Not Certified in Appropriate Field Reported Statewide	Difference	Rank Based on Difference
ESE*	65,272	11.18%	8,860	19.27%	-8.09%	1
English	34,049	5.83%	4,599	10.00%	-4.17%	2
Reading*	7,775	1.33%	1,445	3.14%	-1.81%	3
ESOL*	3,441	0.59%	655	1.42%	-0.83%	4
Science-Physical*	3,571	0.61%	487	1.06%	-0.45%	5
Science-General*	12,483	2.14%	1,188	2.58%	-0.44%	6
Science-Earth & Space	3,504	0.60%	411	0.89%	-0.29%	7
Gifted	942	0.16%	160	0.35%	-0.19%	8
Technical Education	4,248	0.73%	422	0.92%	-0.19%	8
Math	34,119	5.84%	2,764	6.01%	-0.17%	10
Foreign Languages-Other	1,448	0.25%	165	0.36%	-0.11%	11
Health	654	0.11%	94	0.20%	-0.09%	12
Driver Education	242	0.04%	19	0.04%	0.00%	13
Early Childhood/Preschool	223	0.04%	6	0.01%	0.03%	14
Business Education	2,654	0.45%	191	0.42%	0.03%	14
Educational Media Specialist	2,053	0.35%	120	0.26%	0.09%	16
Agriculture	1,725	0.30%	76	0.17%	0.13%	17
Foreign Languages-French	1,393	0.24%	50	0.11%	0.13%	17
Pre-K/Primary Education	1,870	0.32%	84	0.18%	0.14%	19
Science-Biology	7,395	1.27%	518	1.13%	0.14%	19

Certification Areas	Total Number of Courses Reported Statewide	Percentage of Total Courses Reported Statewide	Total Number of Courses Taught by Teachers Not Certified in Appropriate Field Reported Statewide	Percentage of Total Courses Taught by Teachers Not Certified in Appropriate Field Reported Statewide	Difference	Rank Based on Difference
Family And Consumer Sciences	2,272	0.39%	110	0.24%	0.15%	21
Physical Education	6,746	1.16%	432	0.94%	0.22%	22
Drama	3,713	0.64%	148	0.32%	0.32%	23
Computer Science	6,265	1.07%	300	0.65%	0.42%	24
Foreign Languages-Spanish	7,814	1.34%	299	0.65%	0.69%	25
Art	18,154	3.11%	979	2.13%	0.98%	26
Social Sciences	27,641	4.73%	1,598	3.48%	1.25%	27
Music	26,606	4.56%	778	1.69%	2.87%	28
Elementary Education	295,571	50.63%	19,017	41.36%	9.27%	29
Statewide Total	583,843	100.00%	45,975	100.00%		

Note: Certification areas that were missing data in one or more of the measures examined were not ranked and excluded from final critical teacher shortage rankings in Exhibit 1. Bolded subject fields indicate 2021-22 Critical Teacher Shortages.

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Most of the recommended critical teacher shortage areas for 2021-22 are among those with the highest projected vacancies and the highest number of current vacancies for 2020-21. Exhibit 4 provides the total number of current vacancies for the 2020-21 school year and the total number of projected vacancies by certification area. This information is collected from each district and is typically used to plan recruitment efforts, including “The Great Florida Teach-In” held annually. This highlights the anticipated subject areas of teacher demand seen across all school districts.

Exhibit 4 – Number of Current and Projected Vacancies by Certification Area

Certification Area	Current Number of Vacancies for 2020-21	Percentage of Current Vacancies for 2020-21	Projected Number of Vacancies for 2020-21	Percentage of Projected Vacancies for 2020-21	Rank Based on Projected Vacancies
Elementary Education	766	20.91%	1,985	22.96%	1
ESE*	880	24.02%	1,702	19.68%	2
Math	245	6.69%	588	6.80%	3
English	258	7.04%	579	6.70%	4
Pre-K/Primary Education	68	1.86%	426	4.93%	5
Science-General*	152	4.15%	370	4.28%	6
Speech Language Pathologist	220	6.01%	332	3.84%	7
Reading*	164	4.48%	331	3.83%	8
Social Sciences	120	3.28%	320	3.70%	9
Guidance	111	3.03%	194	2.24%	10

Certification Area	Current Number of Vacancies for 2020-21	Percentage of Current Vacancies for 2020-21	Projected Number of Vacancies for 2020-21	Percentage of Projected Vacancies for 2020-21	Rank Based on Projected Vacancies
ESOL*	79	2.16%	172	1.99%	11
Science-Physical*	24	0.66%	160	1.85%	12
Science-Biology	44	1.20%	146	1.69%	13
Music	60	1.64%	132	1.53%	14
Physical Education	60	1.64%	131	1.51%	15
Gifted	40	1.09%	113	1.31%	16
School Psychologist	34	0.93%	104	1.20%	17
Foreign Languages-Spanish	52	1.42%	101	1.17%	18
Art	73	1.99%	96	1.11%	19
Early Childhood/Preschool	11	0.30%	86	0.99%	20
School Social Worker	20	0.55%	86	0.99%	20
Technical Education	32	0.87%	80	0.93%	22
Business Education	47	1.28%	78	0.90%	23
Educational Media Specialist	37	1.01%	60	0.69%	24
Science-Earth & Space	8	0.22%	60	0.69%	24
Computer Science	4	0.11%	51	0.59%	26
Drama	8	0.22%	35	0.40%	27
Health	13	0.35%	34	0.39%	28
Family and Consumer Sciences	18	0.49%	32	0.37%	29
Agriculture	4	0.11%	21	0.24%	30
Foreign Languages-Other	3	0.08%	17	0.20%	31
Foreign Languages-French	5	0.14%	13	0.15%	32
Driver Education	3	0.08%	12	0.14%	33
Statewide Total	3,663	100.00%	8,647	100.00%	

Note: Certification areas that were missing data in one or more of the measures examined were not ranked and excluded from final critical teacher shortage rankings in Exhibit 1. Bolded subject fields indicate 2021-22 Critical Teacher Shortages.

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The number of post-secondary students earning a certification in a particular content area in Florida gives an estimate of the number of new teachers available to fill vacancies in the state. Exhibit 5 presents the most recent information on new completers reported by teacher education programs across Florida.

Exhibit 5 – Number of Students Completing Teacher Education Programs in 2018-19

Certification Areas	Number and Percentage of Completers Reported		Rank Based on Percentage of Completers Reported
Science-Earth & Space	0	0.00%	1
Technical Education	0	0.00%	1
Foreign Languages-Other	0	0.00%	1
Educational Media Specialist	0	0.00%	1
Business Education	0	0.00%	1

Certification Areas	Number and Percentage of Completers Reported		Rank Based on Percentage of Completers Reported
Drama	0	0.00%	1
Computer Science	0	0.00%	1
Foreign Languages-Spanish	1	0.03%	8
Foreign Languages-French	1	0.03%	8
Science-General*	13	0.40%	10
Physical Education	13	0.40%	10
Science-Physical*	15	0.46%	12
Agriculture	21	0.64%	13
Art	27	0.83%	14
Early Childhood/Preschool	33	1.01%	15
Science-Biology	41	1.26%	16
School Psychologist	56	1.72%	17
ESOL*	85	2.61%	18
Guidance	92	2.82%	19
Reading*	97	2.98%	20
Math	115	3.53%	21
English	138	4.24%	22
Social Sciences	144	4.42%	23
Music	160	4.91%	24
Pre-K/Primary Education	199	6.11%	25
ESE*	481	14.76%	26
Elementary Education	1526	46.84%	27
Statewide Total	3258	100.0%	

Note: Certification areas that were missing data in one or more of the measures examined were not ranked and excluded from final critical teacher shortage rankings in Exhibit 1. Bolded subject fields indicate 2021-22 Critical Teacher Shortages.

* Science-General includes Science and General Science; Science-Physical includes Chemistry and Physics; ESE includes Exceptional Student Education, Speech Correction, Emotionally Handicapped, Hearing Impaired, Mentally Handicapped, Physically Impaired, Specific Learning Disabilities, Speech-Language Impaired, Varying Exceptionalities, Visually Impaired, Autism Spectrum Disorders endorsement, Adaptive Physical Education, and Orientation and Mobility endorsement; and Reading and ESOL here only include the certification and not the endorsement.

Consistent with s. 1012.07, F.S., high-priority locations are identified as high-density, low-economic urban schools; low-density, low-economic rural schools; and schools that earned a 2018-19 school grade of “F” or three consecutive grades of “D” or below, pursuant to s. 1008.34, F.S.³ Low-economic schools are those that have 75 percent or more students who qualify for free or reduced-price lunch. Urban and rural school distinctions are based on the 2018-19 National Center for Education Statistics (NCES) locale codes which are a measure of geographic status on an urban continuum that ranges from “large city” to “rural” based on the standards used by the Census. A complete list of high-priority school locations can be found in Appendix A and Appendix B.

³ As outlined in Florida Department of Education Emergency Order No. 2020-EO-01, all accountability calculations that were based upon student assessment data were suspended for the 2019-20 school year. As this included the school grades calculations, this table utilizes the same 2018-19 school grade designations as the previous year’s report.

Exhibit 6 provides information on the number of high-priority school locations and the proportion of courses at those locations being taught by teachers who were not certified in the appropriate field for the courses they teach (out-of-field) and teachers who were certified in the appropriate field for the courses they teach (in-field).⁴ The statewide percentage of courses taught by out-of-field teachers for all schools that received a school grade in 2018-19 is 6.79%. Among “high priority D” schools (schools that received grades of “D” or below for each of the previous three years) this percentage was 7.75%. Schools that received a grade of “F” had 5.48% of courses being taught out-of-field, while 8.43% of courses at urban/low-economic schools and 5.84% of courses at rural/low-economic schools are being taught out-of-field. Additionally, Exhibit 6 provides comparative data for other types of school locations (e.g., A, B, and C schools, etc.). Though this information does not contribute to the identification of critical teacher shortage areas, it is provided for context when reviewing high-priority school locations designated as such pursuant to Rule 6A-20.0131, F.A.C., and ss. 1012.07 and 1008.34, F.S.

Exhibit 6 – High-Priority School Locations and Courses Taught by Appropriately Certified Teachers Among Schools that Received a School Grade⁵

School Locations ⁴	Number of Schools	Total Number of Courses	Number and Percentage of Courses In-Field		Number and Percentage of Courses Out-of-Field	
High-Priority School Locations⁶						
High-Priority D	22	2,889	2,665	92.25%	224	7.75%
F	14	1,296	1,225	94.52%	71	5.48%
Urban	494	80,794	73,985	91.57%	6,809	8.43%
Rural	207	35,122	33,070	94.16%	2,052	5.84%
Other School Locations						
A	1,181	233,306	221,075	94.76%	12,231	5.24%
B	909	189,175	175,819	92.94%	13,356	7.06%
C	1,065	197,999	181,984	91.91%	16,015	8.09%
D	137	19,772	17,934	90.70%	1,838	9.30%
Title I	1,967	363,289	335,019	92.22%	28,270	7.78%
Non-Title I	1,361	281,148	265,683	94.50%	15,465	5.50%
Charter	546	64,711	56,868	87.88%	7,843	12.12%
Non-Charter	2,782	579,726	543,834	93.81%	35,892	6.19%
Statewide Totals - All Schools	3,328	644,437	600,702	93.21%	43,735	6.79%

⁴ The data for this exhibit utilize several different sources. ‘Location’ data (both for the school grades and the urban/rural designation) come from 2018-19. The primary list of schools comes from 2019-20 MSID. Course and certification data come from 2019-20 survey reporting.

⁵ As outlined in Florida Department of Education Emergency Order No. 2020-EO-01, all accountability calculations that were based upon student assessment data were suspended for the 2019-20 school year. As this included the school grades calculations, this table utilizes the same 2018-19 school grade designations as the previous year’s report.

⁶ Section 1012.07, F.S., defines high-priority locations as high-density, low-economic urban schools; low-density, low-economic urban schools; low-density, low-economic rural schools; and schools that earned a grade of “F” or three consecutive grades of “D” or below pursuant to s. 1008.34, F.S.