

# IRP@FHDA

**To:** Lorrie Ranck, Dean Learning Resources Division, De Anza College  
**From:** Lourdes Del Rio-Parent, PhD, Sr. Research Analyst/Data Warehouse Coordinator FHDA  
**Date:** March 13, 2015  
**Re:** Estimating the Percentage of Distance Education Courses and Units by Program: Methodology & Results

This report describes methods and procedures to estimate the percentage of distance education courses and units by program (degree and certificates) offered at De Anza College for the current and previous academic years (2010-11 to 2014-15). A key objective is to describe the development of scripts or SQL queries to easily compute these percentages and document related changes across time—a task that when performed manually can take a significant amount of time and be prone to data entry errors. These procedures are meant to help evaluation efforts, in particular those related to accreditation,<sup>1</sup> in which institutions need to identify (a) programs with 50% or more of their courses offered through distance education courses; and, (b) significant changes to the mode of delivery of courses within these programs across academic years, which have resulted in having at least 50% of their units now available through distance education. The report is divided into four sections. In the methodology section, the challenges involved in calculating these percentages are discussed followed by proposed methods on how to address these. The procedures section provides specific details on the steps followed to identify programs for the analysis and how the percentages of units and courses offered through distance education for these programs, and related options, were calculated. The results section shows percentages for distance education courses and units (approved and offered), including significant changes in the mode of delivery of instruction within the last four years. The discussion section provides a summary of findings and opinions on observed trends related to distance education offerings at De Anza College.

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<sup>1</sup> "Institutions are expected to provide the Commission advanced notice of intent to offer a program, degree or certificate in which 50% or more of the courses are via distance education or correspondence education, through the substantive change process. For purposes of this requirement, the institution is responsible for calculating the percentage of courses that may be offered through distance or correspondence education". (*Guide to Evaluating Distance Education and Correspondence Education*, p. 32, June 2013).

## Methodology

The main challenge when estimating the number or percentage of DE (distance education) courses within programs is that students are seldom given a definite set of courses to meet all program requirements. The opposite; most programs have at least one group of restrictive electives or options students can choose from to meet either course or unit requirements (i.e., combination of required or elective courses within a program). Another challenge is how to weight courses during procedures for these can be part of a group of required, electives, or optional courses (i.e., an option within the program). The implication is that the role of the course in the program will impact the extent to which a program can be offered through DE. For example, a program delivered as 100% DE must have all required courses offered as DE, but not all of its required electives. Thus, simply dividing the number of all courses applicable to a program by those offered through DE will likely underestimate percentage figures and fail to detect programs for which all course or units requirements can be met 100% through DE.

To be able to better estimate the extent to which a program is approved or offered through DE, the methodology presented here separates required from elective courses. Required courses are analyzed individually and have a direct impact in the final estimate; for a program to be 100% DE, all required courses must have at least one section offered through DE. Because elective courses are often part of a group (a minimum number of courses or units from a defined set of courses), these are analyzed within the group. This means that the number of courses or units within the set offered as DE is compared against the minimum required for the group; thus, not all elective courses need to be offered as DE for a program to be 100% DE. Programs with options are analyzed separately; percentage figures are computed separately for each option as it was a separate program.

Exhibit 1 provides an example of how the percentage for DE courses was calculated for a program without options, and Exhibit 2 for program with options. Exhibit 1 shows courses grouped by their function or group (required versus elective), the total number of courses within the group, the minimum number of courses to meet requirements, and the number of courses with at least one DE offering/section. The number for *DE Offered Courses* is always set to be equal or less than the *Min Number for Requirement* for the group. Percentage figures for the program are calculated by dividing the total number for *Min Number for Requirement* by the total number by *DE Offered Courses*. Exhibit 2 shows similar procedures for program with options; however, percentages figures are calculated for each option within the program.

Exhibit 1  
Calculating the Percent of DE Courses for a Program without Options

Course Group	All Courses	Min Number for Requirement	DE Offered Courses
<b>Required</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Restrictive Elective Courses Group 1</b>	<b>6</b>	<b>2</b>	<b>2</b>
<b>Restrictive Elective Courses Group 2</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Total</b>		<b>9</b>	<b>9</b>
<b>Percent</b>			<b>100%</b>

Notes:

DE (Distance Education) Offered Courses: At least one section of the course was offered through a distance education delivery mode. It does not included hybrid (mixed methods) sections. This number is set to be less or equal to 'Min Number for Requirement.'

Exhibit 2  
Calculating the Percent of DE Courses for a Program, Option 1

Course Group	All Courses	Min Number Meet Requirement	DE Offered Courses
<b>Required</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Required within Option 1</b>	<b>3</b>	<b>3</b>	<b>2</b>
<b>Alternative/Restrictive Elective Courses within Option 1</b>	<b>4</b>	<b>2</b>	<b>1</b>
<b>Total</b>		<b>10</b>	<b>8</b>
<b>Percent</b>			<b>80%</b>

Notes:

DE (Distance Education) Offered Courses: At least one section of the course was offered through a distance education delivery mode. It does not included hybrid (mixed methods) sections. This number is set to be less or equal to 'Min Number for Requirement.'

## Procedures

A total of 141 programs were included in the analysis for these met the following criteria: (a) approved by the CCCCOC Curriculum Inventory,<sup>2</sup> (b) were active for the 2014-15 academic year at De Anza College, and (c) had a defined number of course or unit requirements, including a number of restrictive course electives or options, as documented by the online College catalog.<sup>3</sup> Using information from a database developed by the Curriculum Department at the College<sup>4</sup> and further reviewed using information posted on the online College catalog,<sup>5</sup> courses were grouped based on their function or role meeting program requirements: required, restrictive elective, or part of an option. Within options, courses were classified as required or elective. For every group of electives, the minimum number of courses and units to meet requirements for the group was identified. No equivalent or crosswalks courses were included for this might have overestimated or underestimated percentage figures. Programs were divided into two groups, based on whether they provided options (groups of required or elective course to meet requirements version of the program). For programs with options, each option was analyzed individually—treated as separate program.

Validated course data was linked to data from the District's information system to identify (a) courses approved for DE (distance education)<sup>6</sup> at De Anza College by fall 2014, and (b) courses with at least with one section<sup>7</sup> offered through DE, as documented by the class schedule for the academic years. SQL scripts were used to calculate number of courses and units required for each program approved for DE, and offered or scheduled as DE, after taking into account the role of the course within

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<sup>2</sup> California Community Colleges Chancellor's Office Curriculum Inventory, <http://curriculum.cccco.edu/>

<sup>3</sup> The CCCCOC Curriculum Inventory showed 174 programs active at De Anza for the 2014-15 academic year (75 degrees, 99 certificates). Of these, 30 were identified as programs no longer active at the College. A few programs (e.g., Automotive Technicians) were not in the inventory. Other programs such as the Associate in Arts Degree in Kinesiology were not included in the analysis given that the College Catalog did not show a defined number of courses applicable to the program—multiple choices of courses within areas.

<sup>4</sup> We expressed our most sincere gratitude to Mi Chang, Senior Academic Services Technician at De Anza College, for developing a database with course catalog data used in this project.

<sup>5</sup> <https://www.deanza.edu/counseling/degrecert.html>

<sup>6</sup> Instruction or schedule mode code beginning with 5, 6, or 7.

<sup>7</sup> It includes sections with enrollment greater than zero.

the program (e.g., required courses and restrictive electives within groups), as shown in Exhibit 1 and 2. Class schedule data (course offerings) for the 2013-14 and 2014-15 academic years was compared to data for 2011-12 to 2012-13 to identify programs that reached the 50% or higher mark in DE course offerings in the last two academic years, which could signal significant changes in the delivery mode for these programs. Time periods of two years were used because the analysis was performed in the middle of the current academic year—to avoid the effect of scheduling pattern in the analysis. Results based on the number of courses and units, within and across academic years, were compared as a way to cross validate results.

## Results

Appendix A to D show results for the last two academic years (2013-14 to 2014-15), labeled as *Current AY*. Appendix E to G show results after comparing data for the last two academic years to data for the prior academic years (2011-12 to 2012-13), labeled as *Prior AY*. These results, which take into account (a) the number of courses or units in the program **approved** for DE (distance education) versus **offered**, and (b) options offered within each program, were used to answer the following questions:

1. *How many programs are currently approved for DE (distance education) at De Anza College, and how many of these have recently been offered as DE?* Appendix A shows that of the 122 programs with no option, 18 (15%) had at least one combination of courses that was 100% approved for DE (*Percent Courses Dist Ed Approved*), while 46 programs (38%) showed that at least 50% of their courses were approved for DE. Same results were obtained using units or credits as the unit of analysis, as shown in Appendix B. Figures in Appendix A also show that for the same group of programs with no options, 9 (7%) had at least one combination of courses offered (*Percent Courses Dist Ed Scheduled*) 100% as DE, while 37 (30%) had 50% or more of the courses offered as DE. When taking into account units, the number of programs that hit the 50% or higher mark raised to 39 (Appendix B). Two programs were

slightly above or below the 50% mark depending on whether credit hours or number of courses was used as the unit of analysis.

Regarding programs with options (a total of 37 combinations of program and option), figures in Appendix C show that 14 (38%) of these were 100% approved for DE, and 27 (73%) had at least 50% of their courses approved for DE. Also, 10 (27%) of the 37 options showed 50% or more of their courses offered or scheduled as DE. None of these options were offered 100% as DE. These results were replicated when using credit hours as the unit of analysis, as shown in Appendix D.

2. *How many programs at De Anza College began offering at least 50% of their courses or units through DE within the last two academics years?*

According to figures in Appendix E, 8 (7%) of the 122 programs with no options became available through DE within the last two academic years. Based on differences in the number of units across year<sup>8</sup> (*Difference in Units* in Appendix F), programs showing an intent to offer 50% or more of their courses as DE during the past years include *Environmental Resource Management and Pollution Prevention* (degree and certificates) and, to some extent, *Journalism* (degree) and *Medical Secretary* (certificate). The data suggest that programs showing an increase in DE offerings mainly due to changes in the courses themselves (updating content or offering different courses) include the following certificates: *Medical File Clerk*, *Medical Records Clerk*, *Business Office Clerk*, and *Medical Secretary*. Regarding programs with options, results in Appendix G and H showed no significant increases in DE offerings. To the contrary, for these programs, mostly in the area of computer information systems, the trend seems to be a decline in DE offerings within the last two academic years.

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<sup>8</sup> Because the analysis calculating units for the same set of courses across year, changes in the number of units may reflect either changes in the number of credit units for the course, or that at least one of the courses was not active during previous years.

## Discussion

The methodology and procedures described in this report, in which courses within a program are grouped by their function (e.g., required, elective, optional) to identify and evaluate minimum requirements for each group, can be used to efficiently track and study changes to instructional programs (degree or certificates), including changes in the methods used for delivery of instruction (e.g., distance education). Although resource intensive during the initial stages (coding of catalog information and grouping courses by their function), once the databases are developed and validated, these procedures can be used to easily compute figures and analyze the information. The only main limitation is that programs with a great deal of flexibility (e.g., programs that allow students to choose courses across groups of restrictive electives) would need to be excluded from the analysis and evaluated separately.

Specific to observed patterns in DE (distance education) offerings at De Anza College, results have shown that nine programs have consistently been offered 100% DE for the last four academic years. Three of these are in the area of business administration and four in liberal arts. Such findings suggest that the College may be ready to begin promoting or expanding its DE offerings, which could help those interested in obtaining a degree or certificate, but have limited physical access or time to attend classes at the College (e.g., limitations due to work schedule, transportation).

At the same time, the analysis also seems to suggest a retreat from distance education by programs related to computer information systems. For a College located at the heart of Silicon Valley and within a few miles from major tech companies, the findings are rather puzzling given that the FTES<sup>9</sup> figures for courses in information technology at the College have not shown a decline, but a small average increase of 20 FTES during the last three academic years (2010-11 to 2013-14).<sup>10</sup> The issues to be addressed at this point are whether the College, or its Department of Computer Information Systems, is intentionally decreasing DE sections for these programs; and if this is the case, what were the factors that have influenced this decision.

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<sup>9</sup> Full-time student equivalent

<sup>10</sup> [http://datamart.cccco.edu/Students/FTES\\_Summary.aspx](http://datamart.cccco.edu/Students/FTES_Summary.aspx), Information Technology, TOP code, two-digit, 07.

**Appendix A. Statistics for Courses Approved or Scheduled for Distance Education at De Anza College by Program, 2013-14 and 2014-15 Academic Years**

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Total Courses Dist Ed Approved</b>	<b>Total Courses Dist Ed Scheduled</b>	<b>Percent Courses Dist Ed Approved</b>	<b>Percent Courses Dist Ed Scheduled</b>
Business Administration	Associate in Arts	10	10	10	100%	100%
Business Administration	Certificate	5	5	5	100%	100%
Transfer Model Curriculum (Business Administration)	Associate in Science-Transfer	8	8	8	100%	100%
Entrepreneurship	Certificate	5	5	5	100%	100%
Liberal Arts: Business and Computer Info. Systems	Associate in Arts	6	6	6	100%	100%
Network Basics	Certificate	4	4	4	100%	100%
Liberal Arts: Social and Behavioral Sciences Emphasis	Associate in Arts	6	6	6	100%	100%
Liberal Arts: Science, Math and Engineering Emphasis	Associate in Arts	6	6	6	100%	100%
Liberal Arts: Arts and Letters Emphasis	Associate in Arts	6	6	6	100%	100%
Global Studies	Certificate-Advanced	13	12	12	92%	92%
Global Studies	Associate in Arts	13	12	12	92%	92%
Management	Associate in Arts	11	10	10	91%	91%
Marketing Management	Associate in Arts	11	10	10	91%	91%
Marketing Management	Certificate-Advanced	9	8	8	89%	89%
Environmental Resource Management and Pollution Prevention	Certificate-Advanced	13	13	11	100%	85%
Environmental Resource Management and Pollution Prevention	Associate in Arts	22	21	18	95%	82%
Web Development	Certificate	5	5	4	100%	80%
Enterprise Security Professional	Certificate	5	5	4	100%	80%
Network Administration	Certificate	5	5	4	100%	80%
Energy Management and Building Science	Certificate	20	20	16	100%	80%
Management	Certificate	5	4	4	80%	80%



<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Total Courses Dist Ed Approved</b>	<b>Total Courses Dist Ed Scheduled</b>	<b>Percent Courses Dist Ed Approved</b>	<b>Percent Courses Dist Ed Scheduled</b>
Marketing Management	Certificate	5	4	4	80%	80%
Computer Aided Design - Mechanical	Certificate	5	4	4	80%	80%
Accounting: Practice Emphasis	Associate in Arts	11	8	8	73%	73%
Accounting: Practice Emphasis	Certificate-Advanced	11	8	8	73%	73%
Environmental Resource Management and Pollution Prevention	Certificate	7	7	5	100%	71%
Accounting	Certificate	7	5	5	71%	71%
Transfer Model Curriculum (Political Science)	Associate in Arts-Transfer	7	5	5	71%	71%
Medical File Clerk	Certificate	6	4	4	67%	67%
Accounting: Taxation Emphasis	Associate in Arts	12	7	7	58%	58%
Accounting: Taxation Emphasis	Certificate-Advanced	12	7	7	58%	58%
Medical Records Clerk	Certificate	7	4	4	57%	57%
Journalism	Associate in Arts	9	6	5	67%	56%
Enterprise Security Professional	Associate in Arts	8	6	4	75%	50%
Tax Practitioner	Certificate-Advanced	12	7	6	58%	50%
Visual Basic Programming	Certificate	4	2	2	50%	50%
Business Office Clerk	Certificate	8	4	4	50%	50%
Enterprise Security Professional	Certificate-Advanced	9	7	4	78%	44%
Real Estate	Certificate-Advanced	9	5	4	56%	44%
English	Associate in Arts	7	4	3	57%	43%
Medical Transcription	Certificate	14	6	6	43%	43%
Medical Secretary	Certificate-Advanced	19	8	8	42%	42%
Speech Communication	Certificate	5	4	2	80%	40%
Product Model Making	Certificate-Advanced	10	4	4	40%	40%
Product Model Making	Associate in Science	10	4	4	40%	40%
Leadership and Social Change	Certificate	5	2	2	40%	40%
Wildlife Science Technician	Certificate-Advanced	16	16	6	100%	38%
Real Estate	Associate in Arts	11	5	4	45%	36%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Total Courses Dist Ed Approved</b>	<b>Total Courses Dist Ed Scheduled</b>	<b>Percent Courses Dist Ed Approved</b>	<b>Percent Courses Dist Ed Scheduled</b>
Wildlife Science Technician	Associate in Arts	18	18	6	100%	33%
Phlebotomy Technician I	Certificate	10	3	3	30%	30%
Medical Assisting	Certificate-Advanced	27	8	8	30%	30%
Medical Assisting	Associate in Arts	27	8	8	30%	30%
Licensed Vocational Nurse to Registered Nurse	Associate in Science	17	7	5	41%	29%
Speech Communication	Associate in Arts	7	4	2	57%	29%
Transfer Model Curriculum (Sociology)	Associate in Arts-Transfer	7	4	2	57%	29%
Transfer Model Curriculum (Communication Studies)	Associate in Arts-Transfer	7	3	2	43%	29%
Bookkeeping	Certificate	7	2	2	29%	29%
Child Development	Certificate	7	2	2	29%	29%
Transfer Model Curriculum (Administration of Justice)	Associate in Science-Transfer	7	2	2	29%	29%
Medical Reception	Certificate	11	3	3	27%	27%
Wildlife Science Technician	Certificate	8	8	2	100%	25%
Photographic Arts	Associate in Arts	12	4	3	33%	25%
CNC Machinist	Associate in Science	12	3	3	25%	25%
CNC Machinist	Certificate-Advanced	12	3	3	25%	25%
CNC Research and Development Machinist	Associate in Science	13	3	3	23%	23%
CNC Research and Development Machinist	Certificate-Advanced	13	3	3	23%	23%
Transfer Model Curriculum (Early Childhood Education)	Associate in Science-Transfer	9	2	2	22%	22%
Project Management Practitioner	Certificate	5	2	1	40%	20%
Child Development	Certificate-Advanced	10	2	2	20%	20%
Massage Therapy	Associate in Arts	16	3	3	19%	19%
Professional Photography	Associate in Arts	12	3	2	25%	17%
Insurance and Coding	Certificate	12	2	2	17%	17%
Early Childhood Mental Health	Certificate	6	1	1	17%	17%

Program Title	Program Type	Total Courses	Total Courses Dist Ed Approved	Total Courses Dist Ed Scheduled	Percent Courses Dist Ed Approved	Percent Courses Dist Ed Scheduled
Early Intervention/Special Education Assistant	Certificate-Advanced	12	2	2	17%	17%
Massage Therapy	Certificate-Advanced	13	2	2	15%	15%
Child Development	Associate in Arts	13	2	2	15%	15%
Registered Nurse	Associate in Science	33	10	5	30%	15%
Lab Assisting	Certificate	14	2	2	14%	14%
Massage Therapy	Certificate	9	1	1	11%	11%
Film/TV: Screenwriting	Associate in Arts	12	1	1	8%	8%
Paralegal Studies	Associate in Arts	12	1	1	8%	8%
Paralegal Studies	Certificate-Advanced	12	1	1	8%	8%
Graphic Design	Associate in Arts	14	5	1	36%	7%
Graphic Design	Certificate-Advanced	14	5	1	36%	7%
Art History	Certificate-Advanced	14	2	1	14%	7%
Art History	Associate in Arts	14	2	1	14%	7%
Music	Associate in Arts	15	1	1	7%	7%
Graphic Design	Certificate	7	2	0	29%	0%
Private Security	Certificate-Advanced	9	1	0	11%	0%
Private Security	Associate in Arts	10	1	0	10%	0%
Film/TV: Production	Certificate-Advanced	11	1	0	9%	0%
Film/TV: Production	Associate in Arts	11	1	0	9%	0%
Law Enforcement	Associate in Arts	11	1	0	9%	0%
Corrections/Probation	Associate in Arts	12	1	0	8%	0%
Film/TV: Production	Certificate	6	0	0	0%	0%
Advanced Automotive Technology	Certificate	5	0	0	0%	0%
Advanced Engine Performance Technology	Certificate	4	0	0	0%	0%
Advanced Engine Performance Technology	Associate in Science	11	0	0	0%	0%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Total Courses Dist Ed Approved</b>	<b>Total Courses Dist Ed Scheduled</b>	<b>Percent Courses Dist Ed Approved</b>	<b>Percent Courses Dist Ed Scheduled</b>
Advanced Engine Performance Technology	Certificate-Advanced	11	0	0	0%	0%
Automotive Chassis Technology	Certificate	3	0	0	0%	0%
Automotive Machining and Engine Repair Technology	Certificate-Advanced	7	0	0	0%	0%
Automotive Machining and Engine Repair Technology	Associate in Science	7	0	0	0%	0%
Automotive Machining and Engine Repair Technology	Certificate	2	0	0	0%	0%
Automotive Powertrain Technology	Certificate	3	0	0	0%	0%
Automotive Powertrain Technology	Associate in Science	7	0	0	0%	0%
Automotive Powertrain Technology	Certificate-Advanced	7	0	0	0%	0%
Automotive Technology: Automotive Chassis and Powertrain	Associate in Science	12	0	0	0%	0%
Automotive Technology: Automotive Chassis and Powertrain	Certificate-Advanced	12	0	0	0%	0%
Automotive Technology: Automotive Engine Performance	Associate in Science	9	0	0	0%	0%
Automotive Technology: Automotive Engine Performance	Certificate-Advanced	9	0	0	0%	0%
Automotive Technology: Automotive Machining and Engine Repair	Certificate-Advanced	9	0	0	0%	0%
Automotive Technology: Automotive Machining and Engine Repair	Associate in Science	9	0	0	0%	0%
Basic Engine Performance Technology	Certificate	4	0	0	0%	0%
Intermediate Engine Performance Technology	Certificate	3	0	0	0%	0%
Smog Technology	Certificate	3	0	0	0%	0%
Manufacturing Systems Technician	Certificate	6	0	0	0%	0%

Program Title	Program Type	Total Courses	Total Courses Dist Ed Approved	Total Courses Dist Ed Scheduled	Percent Courses Dist Ed Approved	Percent Courses Dist Ed Scheduled
Sculpture	Associate in Arts	12	0	0	0%	0%
Sculpture	Certificate-Advanced	12	0	0	0%	0%
Ceramics	Certificate-Advanced	13	0	0	0%	0%
Ceramics	Associate in Arts	13	0	0	0%	0%
Professional Photography	Certificate	6	0	0	0%	0%
Transfer Model Curriculum (Mathematics)	Associate in Science-Transfer	6	0	0	0%	0%

**Notes:**

Only includes courses applicable to the major (required courses and minimum number of restrictive electives). Programs with at least one option (subgroup of restrictive electives or required courses) are not included.

Total Courses: Total number of courses for the major, including required and minimum number of electives.

Total Courses Dist Ed Approved: Number of courses in the major for the program approved for distance education, 2014-15 academic Year (first character of instructional/scheduling method code equal to 5, 7, Or 7). It does not include hybrids.

Total Courses Dist Ed Scheduled: Number of DE courses for the program in the class schedule with at least one section with enrollment greater than 0 (Academic Years, 20213-14 or 2014-15).

Percent Courses Dist Ed Approved: 'Total Courses' divided by 'Total Courses Dist Ed Approved' and multiplied by 100.

Percent Courses Dist Ed Scheduled: 'Total Courses' divided by 'Total Courses Dist Ed Scheduled' and multiplied by 100.

Certificate: 18-26 quarter units

Certificate-Advance: at least 27 quarter units.

**Appendix B. Statistics for Units for Courses Approved or Scheduled for Distance Education at De Anza College by Program, 2013-14 and 2014-15 Academic Years**

<b>Program Title</b>	<b>Program Type</b>	<b>Total Units</b>	<b>Total Units Dist Ed Approved</b>	<b>Total Units Dist Ed Scheduled</b>	<b>Percent Units Dist Ed Approved</b>	<b>Percent Units Dist Ed Scheduled</b>
Business Administration	Certificate	23	23	23	100%	100%
Business Administration	Associate in Arts	49.5	49.5	49.5	100%	100%
Transfer Model Curriculum (Business Administration)	Associate in Science-Transfer	37.5	37.5	37.5	100%	100%
Entrepreneurship	Certificate	24	24	24	100%	100%
Liberal Arts: Business and Computer Info. Systems	Associate in Arts	27	27	27	100%	100%
Network Basics	Certificate	18.5	18.5	18.5	100%	100%
Liberal Arts: Social and Behavioral Sciences Emphasis	Associate in Arts	27	27	27	100%	100%
Liberal Arts: Science, Math and Engineering Emphasis	Associate in Arts	27	27	27	100%	100%
Liberal Arts: Arts and Letters Emphasis	Associate in Arts	27	27	27	100%	100%
Management	Associate in Arts	53	49	49	92%	92%
Global Studies	Certificate-Advanced	53	49	49	92%	92%
Global Studies	Associate in Arts	53	49	49	92%	92%
Marketing Management	Associate in Arts	53	48	48	91%	91%
Computer Aided Design - Mechanical	Certificate	18	16	16	89%	89%
Accounting	Certificate	26	22	22	85%	85%
Energy Management and Building Science	Certificate	25	25	21	100%	84%
Management	Certificate	24	20	20	83%	83%
Environmental Resource Management and Pollution Prevention	Certificate-Advanced	28	28	23	100%	82%
Enterprise Security Professional	Certificate	23.5	23.5	19	100%	81%
Environmental Resource Management and Pollution Prevention	Associate in Arts	52	51	42	98%	81%
Accounting: Practice Emphasis	Associate in Arts	45	36	36	80%	80%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Units</b>	<b>Total Units Dist Ed Approved</b>	<b>Total Units Dist Ed Scheduled</b>	<b>Percent Units Dist Ed Approved</b>	<b>Percent Units Dist Ed Scheduled</b>
Accounting: Practice Emphasis	Certificate-Advanced	45	36	36	80%	80%
Network Administration	Certificate	22.5	22.5	18	100%	80%
Marketing Management	Certificate-Advanced	24	19	19	79%	79%
Marketing Management	Certificate	24	19	19	79%	79%
Web Development	Certificate	21	21	16.5	100%	79%
Transfer Model Curriculum (Political Science)	Associate in Arts-Transfer	28	21	21	75%	75%
Environmental Resource Management and Pollution Prevention	Certificate	18	18	13	100%	72%
Medical File Clerk	Certificate	18.5	13	13	70%	70%
Accounting: Taxation Emphasis	Associate in Arts	45	30	30	67%	67%
Accounting: Taxation Emphasis	Certificate-Advanced	45	30	30	67%	67%
Medical Records Clerk	Certificate	19.5	13	13	67%	67%
Tax Practitioner	Certificate-Advanced	45	30	29	67%	64%
Business Office Clerk	Certificate	21	13	13	62%	62%
Journalism	Associate in Arts	27	18	15	67%	56%
Enterprise Security Professional	Associate in Arts	35.5	28	19	79%	54%
Real Estate	Certificate-Advanced	37	23	19	62%	51%
Enterprise Security Professional	Certificate-Advanced	37.5	30	19	80%	51%
Medical Secretary	Certificate-Advanced	39	19.5	19.5	50%	50%
Visual Basic Programming	Certificate	18.5	9	9	49%	49%
Phlebotomy Technician I	Certificate	18.5	8.5	8.5	46%	46%
English	Associate in Arts	29	17	13	59%	45%
Speech Communication	Certificate	18	16	8	89%	44%
Leadership and Social Change	Certificate	18	8	8	44%	44%
Medical Reception	Certificate	19.5	8.5	8.5	44%	44%
Bookkeeping	Certificate	23	10	10	43%	43%
Product Model Making	Certificate-Advanced	41.5	18	18	43%	43%
Product Model Making	Associate in Science	41	17.5	17.5	43%	43%
Real Estate	Associate in Arts	47	23	19	49%	40%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Units</b>	<b>Total Units Dist Ed Approved</b>	<b>Total Units Dist Ed Scheduled</b>	<b>Percent Units Dist Ed Approved</b>	<b>Percent Units Dist Ed Scheduled</b>
Medical Transcription	Certificate	25.5	10	10	39%	39%
Medical Assisting	Certificate-Advanced	52.5	19.5	19.5	37%	37%
Medical Assisting	Associate in Arts	52.5	19.5	19.5	37%	37%
Wildlife Science Technician	Certificate-Advanced	47	47	16	100%	34%
Child Development	Certificate	24	8	8	33%	33%
Licensed Vocational Nurse to Registered Nurse	Associate in Science	67	27	21	40%	31%
Wildlife Science Technician	Associate in Arts	54	54	16	100%	30%
Photographic Arts	Associate in Arts	41	15	12	37%	29%
Speech Communication	Associate in Arts	28	16	8	57%	29%
Transfer Model Curriculum (Communication Studies)	Associate in Arts-Transfer	28	12	8	43%	29%
Transfer Model Curriculum (Administration of Justice)	Associate in Science-Transfer	28	8	8	29%	29%
Transfer Model Curriculum (Sociology)	Associate in Arts-Transfer	28	16	8	57%	29%
CNC Machinist	Associate in Science	49.5	13.5	13.5	27%	27%
CNC Machinist	Certificate-Advanced	49.5	13.5	13.5	27%	27%
CNC Research and Development Machinist	Associate in Science	51.5	13.5	13.5	26%	26%
CNC Research and Development Machinist	Certificate-Advanced	51.5	13.5	13.5	26%	26%
Transfer Model Curriculum (Early Childhood Education)	Associate in Science-Transfer	37	8	8	22%	22%
Professional Photography	Associate in Arts	43	13	9	30%	21%
Child Development	Certificate-Advanced	40	8	8	20%	20%
Early Childhood Mental Health	Certificate	20	4	4	20%	20%
Wildlife Science Technician	Certificate	26	26	5	100%	19%
Registered Nurse	Associate in Science	112	35	21	31%	19%
Insurance and Coding	Certificate	21.5	4	4	19%	19%
Massage Therapy	Associate in Arts	52	9	9	17%	17%



<b>Program Title</b>	<b>Program Type</b>	<b>Total Units</b>	<b>Total Units Dist Ed Approved</b>	<b>Total Units Dist Ed Scheduled</b>	<b>Percent Units Dist Ed Approved</b>	<b>Percent Units Dist Ed Scheduled</b>
Early Intervention/Special Education Assistant	Certificate-Advanced	44	7	7	16%	16%
Project Management Practitioner	Certificate	19	8	3	42%	16%
Lab Assisting	Certificate	25.5	4	4	16%	16%
Child Development	Associate in Arts	51	8	8	16%	16%
Massage Therapy	Certificate-Advanced	44.5	6	6	13%	13%
Music	Associate in Arts	46	4	4	9%	9%
Paralegal Studies	Associate in Arts	46	4	4	9%	9%
Paralegal Studies	Certificate-Advanced	46	4	4	9%	9%
Film/TV: Screenwriting	Associate in Arts	48	4	4	8%	8%
Art History	Certificate-Advanced	50	8	4	16%	8%
Art History	Associate in Arts	50	8	4	16%	8%
Massage Therapy	Certificate	25.5	2	2	8%	8%
Graphic Design	Associate in Arts	42	15	3	36%	7%
Graphic Design	Certificate-Advanced	42	15	3	36%	7%
Film/TV: Production	Certificate	24	0	0	0%	0%
Film/TV: Production	Certificate-Advanced	42	3	0	7%	0%
Film/TV: Production	Associate in Arts	42	3	0	7%	0%
Advanced Automotive Technology	Certificate	22.5	0	0	0%	0%
Advanced Engine Performance Technology	Certificate	18	0	0	0%	0%
Advanced Engine Performance Technology	Associate in Science	57	0	0	0%	0%
Advanced Engine Performance Technology	Certificate-Advanced	57	0	0	0%	0%
Automotive Chassis Technology	Certificate	18	0	0	0%	0%
Automotive Machining and Engine Repair Technology	Certificate-Advanced	48	0	0	0%	0%
Automotive Machining and Engine Repair Technology	Associate in Science	48	0	0	0%	0%

Program Title	Program Type	Total Units	Total Units Dist Ed Approved	Total Units Dist Ed Scheduled	Percent Units Dist Ed Approved	Percent Units Dist Ed Scheduled
Automotive Machining and Engine Repair Technology	Certificate	18	0	0	0%	0%
Automotive Powertrain Technology	Certificate	22.5	0	0	0%	0%
Automotive Powertrain Technology	Associate in Science	43.5	0	0	0%	0%
Automotive Powertrain Technology	Certificate-Advanced	43.5	0	0	0%	0%
Automotive Technology: Automotive Chassis and Powertrain	Associate in Science	41	0	0	0%	0%
Automotive Technology: Automotive Chassis and Powertrain	Certificate-Advanced	41	0	0	0%	0%
Automotive Technology: Automotive Engine Performance	Associate in Science	44.5	0	0	0%	0%
Automotive Technology: Automotive Engine Performance	Certificate-Advanced	44.5	0	0	0%	0%
Automotive Technology: Automotive Machining and Engine Repair	Certificate-Advanced	37	0	0	0%	0%
Automotive Technology: Automotive Machining and Engine Repair	Associate in Science	37	0	0	0%	0%
Basic Engine Performance Technology	Certificate	21	0	0	0%	0%
Intermediate Engine Performance Technology	Certificate	18	0	0	0%	0%
Smog Technology	Certificate	18.5	0	0	0%	0%
Manufacturing Systems Technician	Certificate	22.5	0	0	0%	0%
Sculpture	Associate in Arts	37	0	0	0%	0%
Sculpture	Certificate-Advanced	37	0	0	0%	0%
Ceramics	Certificate-Advanced	38	0	0	0%	0%
Ceramics	Associate in Arts	38	0	0	0%	0%
Professional Photography	Certificate	18	0	0	0%	0%
Graphic Design	Certificate	21	6	0	29%	0%
Transfer Model Curriculum (Mathematics)	Associate in Science-Transfer	30	0	0	0%	0%

Program Title	Program Type	Total Units	Total Units Dist Ed Approved	Total Units Dist Ed Scheduled	Percent Units Dist Ed Approved	Percent Units Dist Ed Scheduled
Law Enforcement	Associate in Arts	42	4	0	10%	0%
Corrections/Probation	Associate in Arts	46	4	0	9%	0%
Private Security	Certificate-Advanced	37	4	0	11%	0%
Private Security	Associate in Arts	38	4	0	11%	0%

**Notes:**

Only includes courses applicable to the major (required courses and minimum number of restrictive electives). Programs with at least one option (subgroup of restrictive electives or required courses) are not included.

Total Units: Total number of units for the major, including those for required courses and minimum number of electives.

Total Units Dist Ed Approved: Number of units for courses in the major for the program approved for distance education, 2014-15 academic Year (first character of instructional/scheduling method code equal to 5, 7, or 7). It does not include hybrids.

Total Units Dist Ed Scheduled: Number of units for DE courses for the program in the class schedule with at least one section with enrollment greater than 0 (Academic Years, 20213-14 Or 2014-15).

Percent Units Dist Ed Approved: 'Total Units' divided by 'Total Units Dist Ed Approved' and multiplied by 100.

Percent Units Dist Ed Scheduled: 'Total Units' divided by 'Total Units Dist Ed Scheduled' and multiplied by 100.

Certificate: 18-26 quarter units

Certificate-Advance: at least 27 quarter units.

**Appendix C. Statistics for Courses Approved or Scheduled for Distance Education at De Anza College by Program and Option ID, 2013-14 and 2014-15 Academic Years**

Program Title	Program Type	Option ID	Total Courses	Total Courses	Total Courses	Percent Courses	Percent Courses
				Dist Ed Approved	Dist Ed Scheduled	Dist Ed Approved	Dist Ed Scheduled
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 1	8	6	6	75%	75%
Network Administration	Associate in Arts	OPTION 2	9	9	6	100%	67%
Network Administration	Certificate-Advanced	OPTION 2	9	9	6	100%	67%
Business Programming	Certificate-Advanced	OPTION 2	9	8	6	89%	67%
Business Programming	Associate in Arts	OPTION 1	9	8	6	89%	67%
UNIX/LINUX Operating System	Certificate	OPTION 2	5	5	3	100%	60%
Network Administration	Associate in Arts	OPTION 1	9	9	5	100%	56%
Network Administration	Certificate-Advanced	OPTION 1	9	9	5	100%	56%
Business Programming	Certificate-Advanced	OPTION 1	9	8	5	89%	56%
Business Programming	Associate in Arts	OPTION 2	9	8	5	89%	56%
Systems Programming	Associate in Arts	OPTION 1	9	9	4	100%	44%
Systems Programming	Certificate-Advanced	OPTION 2	9	9	4	100%	44%
Network Programming	Associate in Arts	OPTION 2	9	8	4	89%	44%
Network Programming	Certificate-Advanced	OPTION 2	9	8	4	89%	44%
Programming in JAVA	Certificate	OPTION 2	5	5	2	100%	40%
UNIX/LINUX Operating System	Certificate	OPTION 1	5	5	2	100%	40%
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 2	8	3	3	38%	38%
Systems Programming	Associate in Arts	OPTION 2	9	9	3	100%	33%
Systems Programming	Certificate-Advanced	OPTION 1	9	9	3	100%	33%
Network Programming	Associate in Arts	OPTION 1	9	8	3	89%	33%
Network Programming	Certificate-Advanced	OPTION 1	9	8	3	89%	33%
Database Design for Developers (Oracle)	Certificate	OPTION 2	6	3	2	50%	33%
Programming in C/C++	Certificate	OPTION 2	4	4	1	100%	25%
Programming in JAVA	Certificate	OPTION 1	5	5	1	100%	20%
Programming in PERL	Certificate	OPTION 2	5	4	1	80%	20%

Program Title	Program Type	Option ID	Total Courses	Total Courses Dist Ed Approved	Total Courses Dist Ed Scheduled	Percent Courses Dist Ed Approved	Percent Courses Dist Ed Scheduled
Database Design for Developers (Oracle)	Certificate	OPTION 1	6	3	1	50%	17%
Programming in C/C++	Certificate	OPTION 1	4	4	0	100%	0%
Programming in PERL	Certificate	OPTION 1	5	4	0	80%	0%
Painting	Associate in Arts	OPTION 2	10	1	0	10%	0%
Painting	Associate in Arts	OPTION 1	10	1	0	10%	0%
Painting	Certificate-Advanced	OPTION 2	10	1	0	10%	0%
Painting	Certificate-Advanced	OPTION 1	10	1	0	10%	0%
Biological Sciences	Associate in Science	OPTION 2	9	0	0	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 2	24	0	0	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 1	24	0	0	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 2	24	0	0	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 1	24	0	0	0%	0%

**Notes:**

Only includes courses applicable to the major (required courses and minimum number of restrictive electives).

Total Courses: Total number of courses for the major, including required and minimum number of electives.

Total Courses Dist Ed Approved: Number of courses in the major for the program approved for distance education, 2014-15 academic Year (first character of instructional/scheduling method code equal to 5, 7, Or 7). It does not include hybrids.

Total Courses Dist Ed Scheduled: Number of DE courses for the program in the class schedule with at least one section with enrollment greater than 0 (Academic Years, 20213-14 or 2014-15).

Percent Courses Dist Ed Approved: 'Total Courses' divided by 'Total Courses Dist Ed Approved' and multiplied by 100.

Percent Courses Dist Ed Scheduled: 'Total Courses' divided by 'Total Courses Dist Ed Scheduled' and multiplied by 100.

Certificate: 18-26 quarter units

Certificate-Advance: at least 27 quarter units.

**Appendix D. Statistics for Units for Courses Approved or Scheduled for Distance Education at De Anza College by Program and Option ID, 2013-14 and 2014-15 Academic Years**

Program Title	Program Type	Option ID	Total Units	Total Units	Total Units	Percent Units	Percent Units
				Dist Ed	Dist Ed	Dist Ed	Dist Ed
				Approved	Scheduled	Approved	Scheduled
Transfer Model Curriculum (His	Associate in Science-Transfer	OPTION 1	32	24	24	75%	75%
Network Administration	Associate in Arts	OPTION 2	40.5	40.5	27.5	100%	68%
Network Administration	Certificate-Advanced	OPTION 2	40.5	40.5	27.5	100%	68%
Business Programming	Certificate-Advanced	OPTION 2	41.5	37	28	89%	67%
Business Programming	Associate in Arts	OPTION 1	41.5	37	28	89%	67%
UNIX/LINUX Operating System	Certificate	OPTION 2	22.5	22.5	13.5	100%	60%
Network Administration	Associate in Arts	OPTION 1	40.5	40.5	23	100%	57%
Network Administration	Certificate-Advanced	OPTION 1	40.5	40.5	23	100%	57%
Business Programming	Certificate-Advanced	OPTION 1	41.5	37	23.5	89%	57%
Business Programming	Associate in Arts	OPTION 2	41.5	37	23.5	89%	57%
Systems Programming	Associate in Arts	OPTION 1	41.5	41.5	19	100%	46%
Systems Programming	Certificate-Advanced	OPTION 2	41	41	18.5	100%	45%
Network Programming	Associate in Arts	OPTION 2	41	36.5	18.5	89%	45%
Network Programming	Certificate-Advanced	OPTION 2	41	36.5	18.5	89%	45%
Programming in JAVA	Certificate	OPTION 2	22.5	22.5	9	100%	40%
UNIX/LINUX Operating System	Certificate	OPTION 1	22.5	22.5	9	100%	40%
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 2	32	12	12	38%	38%
Database Design for Developers (Oracle)	Certificate	OPTION 2	24.5	13.5	9	55%	37%
Systems Programming	Associate in Arts	OPTION 2	41.5	41.5	14.5	100%	35%
Systems Programming	Certificate-Advanced	OPTION 1	41	41	14	100%	34%
Network Programming	Associate in Arts	OPTION 1	41	36.5	14	89%	34%
Network Programming	Certificate-Advanced	OPTION 1	41	36.5	14	89%	34%
Programming in C/C++	Certificate	OPTION 2	18	18	4.5	100%	25%
Programming in JAVA	Certificate	OPTION 1	22.5	22.5	4.5	100%	20%

Program Title	Program Type	Option ID	Total Units	Total Units Dist Ed Approved	Total Units Dist Ed Scheduled	Percent Units Dist Ed Approved	Percent Units Dist Ed Scheduled
Programming in PERL	Certificate	OPTION 2	22.5	18	4.5	80%	20%
Database Design for Developers (Oracle)	Certificate	OPTION 1	24.5	13.5	4.5	55%	18%
Programming in C/C++	Certificate	OPTION 1	18	18	0	100%	0%
Programming in PERL	Certificate	OPTION 1	22.5	18	0	80%	0%
Painting	Associate in Arts	OPTION 2	31	3	0	10%	0%
Painting	Associate in Arts	OPTION 1	31	3	0	10%	0%
Painting	Certificate-Advanced	OPTION 2	31	3	0	10%	0%
Painting	Certificate-Advanced	OPTION 1	31	3	0	10%	0%
Biological Sciences	Associate in Science	OPTION 2	48	0	0	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 2	88	0	0	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 1	91	0	0	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 2	88	0	0	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 1	91	0	0	0%	0%

**Notes:**

Only includes courses applicable to the major (required courses and minimum number of restrictive electives).

Total Courses: Total number of units for the major, including required and minimum number of electives.

Total Units Dist Ed Approved: Number of units for courses in the major for the program approved for distance education, 2014-15 academic Year (first character of instructional/scheduling method code equal to 5, 7, Or 7). It does not include hybrids.

Total Units Dist Ed Scheduled: Number of units for DE courses for the program in the class schedule with at least one section with enrollment greater than 0 (Academic Years, 20213-14 Or 2014-15).

Percent Courses Dist Ed Approved: 'Total Courses' divided by 'Total Courses Dist Ed Approved' and multiplied by 100.

Percent Courses Dist Ed Scheduled: 'Total Courses' divided by 'Total Courses Dist Ed Scheduled' and multiplied by 100.

Certificate: 18-26 quarter units

Certificate-Advance: at least 27 quarter units.

Certificate of Achievement





**Appendix E. Statistics for Courses Approved or Scheduled for Distance Education at De Anza College by Program, Current and Prior Academic Years**

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Prior AY Percent Courses Dist Ed Scheduled</b>	<b>Current AY Percent Courses Dist Ed Scheduled</b>	<b>Percent Difference in Dist Ed Scheduled</b>
Business Administration	Associate in Arts	10	100%	100%	2%
Business Administration	Certificate	5	100%	100%	0%
Transfer Model Curriculum (Business Administration)	Associate in Science-Transfer	8	100%	100%	0%
Entrepreneurship	Certificate	5	100%	100%	0%
Liberal Arts: Business and Computer Info. Systems	Associate in Arts	6	100%	100%	0%
Network Basics	Certificate	4	100%	100%	0%
Liberal Arts: Social and Behavioral Sciences Emphasis	Associate in Arts	6	100%	100%	0%
Liberal Arts: Science, Math and Engineering Emphasis	Associate in Arts	6	100%	100%	0%
Liberal Arts: Arts and Letters Emphasis	Associate in Arts	6	100%	100%	0%
Global Studies	Associate in Arts	13	92%	92%	0%
Global Studies	Certificate-Advanced	13	92%	92%	0%
Management	Associate in Arts	11	82%	91%	9%
Marketing Management	Associate in Arts	11	91%	91%	0%
Marketing Management	Certificate-Advanced	9	89%	89%	0%
Environmental Resource Management and Pollution Prevention	Certificate-Advanced	13	62%	85%	23%
Environmental Resource Management and Pollution Prevention	Associate in Arts	22	73%	82%	9%
Computer Aided Design - Mechanical	Certificate	5	20%	80%	60%
Management	Certificate	5	60%	80%	20%
Web Development	Certificate	5	60%	80%	20%
Network Administration	Certificate	5	60%	80%	20%
Enterprise Security Professional	Certificate	5	60%	80%	20%
Marketing Management	Certificate	5	80%	80%	0%

Program Title	Program Type	Total Courses	Prior AY Percent Courses Dist Ed Scheduled	Current AY Percent Courses Dist Ed Scheduled	Percent Difference in Dist Ed Scheduled
Energy Management and Building Science	Certificate	20	80%	80%	0%
Accounting: Practice Emphasis	Associate in Arts	11	64%	73%	9%
Accounting: Practice Emphasis	Certificate-Advanced	11	64%	73%	9%
Environmental Resource Management and Pollution Prevention	Certificate	7	43%	71%	29%
Accounting	Certificate	7	57%	71%	14%
Transfer Model Curriculum (Political Science)	Associate in Arts-Transfer	7	71%	71%	0%
Medical File Clerk	Certificate	6	33%	67%	33%
Accounting: Taxation Emphasis	Associate in Arts	12	50%	58%	8%
Accounting: Taxation Emphasis	Certificate-Advanced	12	50%	58%	8%
Medical Records Clerk	Certificate	7	29%	57%	29%
Journalism	Associate in Arts	9	33%	56%	22%
Business Office Clerk	Certificate	8	25%	50%	25%
Enterprise Security Professional	Associate in Arts	8	38%	50%	13%
Tax Practitioner	Certificate-Advanced	12	42%	50%	8%
Visual Basic Programming	Certificate	4	50%	50%	0%
Enterprise Security Professional	Certificate-Advanced	9	33%	44%	11%
Real Estate	Certificate-Advanced	9	44%	44%	0%
Medical Transcription	Certificate	14	43%	43%	0%
English	Associate in Arts	7	43%	43%	0%
Medical Secretary	Certificate-Advanced	19	37%	42%	5%
Product Model Making	Associate in Science	10	10%	40%	30%
Product Model Making	Certificate-Advanced	10	10%	40%	30%
Speech Communication	Certificate	5	40%	40%	0%
Leadership and Social Change	Certificate	5	40%	40%	0%
Wildlife Science Technician	Certificate-Advanced	16	38%	38%	0%
Real Estate	Associate in Arts	11	36%	36%	0%
Wildlife Science Technician	Associate in Arts	18	33%	33%	0%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Prior AY Percent Courses Dist Ed Scheduled</b>	<b>Current AY Percent Courses Dist Ed Scheduled</b>	<b>Percent Difference in Dist Ed Scheduled</b>
Phlebotomy Technician I	Certificate	10	20%	30%	10%
Medical Assisting	Associate in Arts	27	26%	30%	4%
Medical Assisting	Certificate-Advanced	27	26%	30%	4%
Licensed Vocational Nurse to Registered Nurse	Associate in Science	17	24%	29%	6%
Transfer Model Curriculum (Sociology)	Associate in Arts-Transfer	7	14%	29%	14%
Bookkeeping	Certificate	7	29%	29%	0%
Child Development	Certificate	7	29%	29%	0%
Speech Communication	Associate in Arts	7	29%	29%	0%
Transfer Model Curriculum (Communication Studies)	Associate in Arts-Transfer	7	29%	29%	0%
Transfer Model Curriculum (Administration of Justice)	Associate in Science-Transfer	7	29%	29%	0%
Medical Reception	Certificate	11	18%	27%	9%
CNC Machinist	Associate in Science	12	8%	25%	17%
CNC Machinist	Certificate-Advanced	12	8%	25%	17%
Wildlife Science Technician	Certificate	8	25%	25%	0%
Photographic Arts	Associate in Arts	12	25%	25%	0%
CNC Research and Development Machinist	Associate in Science	13	8%	23%	15%
CNC Research and Development Machinist	Certificate-Advanced	13	8%	23%	15%
Transfer Model Curriculum (Early Childhood Education)	Associate in Science-Transfer	9	22%	22%	0%
Project Management Practitioner	Certificate	5	20%	20%	0%
Child Development	Certificate-Advanced	10	20%	20%	0%
Massage Therapy	Associate in Arts	16	13%	19%	6%
Professional Photography	Associate in Arts	12	17%	17%	0%
Insurance and Coding	Certificate	12	17%	17%	0%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Prior AY Percent Courses Dist Ed Scheduled</b>	<b>Current AY Percent Courses Dist Ed Scheduled</b>	<b>Percent Difference in Dist Ed Scheduled</b>
Early Intervention/Special Education Assistant	Certificate-Advanced	12	17%	17%	0%
Early Childhood Mental Health	Certificate	6	17%	17%	0%
Massage Therapy	Certificate-Advanced	13	8%	15%	8%
Child Development	Associate in Arts	13	15%	15%	0%
Registered Nurse	Associate in Science	33	12%	15%	3%
Lab Assisting	Certificate	14	14%	14%	0%
Massage Therapy	Certificate	9	0%	11%	11%
Film/TV: Screenwriting	Associate in Arts	12	8%	8%	0%
Paralegal Studies	Associate in Arts	12	8%	8%	0%
Paralegal Studies	Certificate-Advanced	12	8%	8%	0%
Art History	Associate in Arts	14	7%	7%	0%
Art History	Certificate-Advanced	14	7%	7%	0%
Graphic Design	Associate in Arts	14	7%	7%	0%
Graphic Design	Certificate-Advanced	14	7%	7%	0%
Music	Associate in Arts	15	7%	7%	0%
Film/TV: Production	Certificate-Advanced	11	0%	0%	0%
Film/TV: Production	Certificate	6	0%	0%	0%
Film/TV: Production	Associate in Arts	11	0%	0%	0%
Automotive Technology: Automotive Machining and Engine Repair	Associate in Science	9	0%	0%	0%
Automotive Powertrain Technology	Associate in Science	7	0%	0%	0%
Automotive Machining and Engine Repair Technology	Associate in Science	7	0%	0%	0%
Automotive Technology: Automotive Engine Performance	Associate in Science	9	0%	0%	0%
Automotive Technology: Automotive Chassis and Powertrain	Associate in Science	12	0%	0%	0%
Advanced Engine Performance Technology	Associate in Science	11	0%	0%	0%

<b>Program Title</b>	<b>Program Type</b>	<b>Total Courses</b>	<b>Prior AY Percent Courses Dist Ed Scheduled</b>	<b>Current AY Percent Courses Dist Ed Scheduled</b>	<b>Percent Difference in Dist Ed Scheduled</b>
Advanced Engine Performance Technology	Certificate-Advanced	11	0%	0%	0%
Automotive Machining and Engine Repair Technology	Certificate-Advanced	7	0%	0%	0%
Automotive Powertrain Technology	Certificate-Advanced	7	0%	0%	0%
Automotive Technology: Automotive Chassis and Powertrain	Certificate-Advanced	12	0%	0%	0%
Automotive Technology: Automotive Engine Performance	Certificate-Advanced	9	0%	0%	0%
Automotive Technology: Automotive Machining and Engine Repair	Certificate-Advanced	9	0%	0%	0%
Smog Technology	Certificate	3	0%	0%	0%
Advanced Automotive Technology	Certificate	5	0%	0%	0%
Automotive Machining and Engine Repair Technology	Certificate	2	0%	0%	0%
Automotive Powertrain Technology	Certificate	3	0%	0%	0%
Automotive Chassis Technology	Certificate	3	0%	0%	0%
Advanced Engine Performance Technology	Certificate	4	0%	0%	0%
Intermediate Engine Performance Technology	Certificate	3	0%	0%	0%
Basic Engine Performance Technology	Certificate	4	0%	0%	0%
Manufacturing Systems Technician	Certificate	6	0%	0%	0%
Sculpture	Associate in Arts	12	0%	0%	0%
Sculpture	Certificate-Advanced	12	0%	0%	0%
Ceramics	Associate in Arts	13	0%	0%	0%
Ceramics	Certificate-Advanced	13	0%	0%	0%
Professional Photography	Certificate	6	0%	0%	0%
Graphic Design	Certificate	7	0%	0%	0%

Program Title	Program Type	Total Courses	Prior AY Percent Courses Dist Ed Scheduled	Current AY Percent Courses Dist Ed Scheduled	Percent Difference in Dist Ed Scheduled
Transfer Model Curriculum (Mathematics)	Associate in Science-Transfer	6	0%	0%	0%
Law Enforcement	Associate in Arts	11	0%	0%	0%
Corrections/Probation	Associate in Arts	12	0%	0%	0%
Private Security	Associate in Arts	10	0%	0%	0%
Private Security	Certificate-Advanced	9	0%	0%	0%

**Notes:**

Prior AY: Prior academic years, 2011-12 and 2012-13

Current AY: 2013-14 and 2014-15

Total Courses: Courses identified for the program in the College Catalog for 2014-15.

Program sorted by 'Current AY Percent Courses Dist Ed Scheduled' --high to low.

**Appendix G. Statistics for Courses Approved or Scheduled for Distance Education at De Anza College by Program and Option, Current and Prior Academic Years**

<b>Program Title</b>	<b>Program Type</b>	<b>Option ID</b>	<b>Total Courses</b>	<b>Prior AY Percent Courses Dist Ed Scheduled</b>	<b>Current AY Percent Courses Dist Ed Scheduled</b>	<b>Difference in Dist Ed Scheduled Percentages</b>
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 1	8	75%	75%	0%
Business Programming	Associate in Arts	OPTION 1	9	78%	67%	11%
Business Programming	Certificate-Advanced	OPTION 2	9	78%	67%	11%
Network Administration	Associate in Arts	OPTION 2	9	67%	67%	0%
Network Administration	Certificate-Advanced	OPTION 2	9	67%	67%	0%
UNIX/LINUX Operating System	Certificate	OPTION 2	5	60%	60%	0%
Business Programming	Associate in Arts	OPTION 2	9	67%	56%	11%
Business Programming	Certificate-Advanced	OPTION 1	9	67%	56%	11%
Network Administration	Associate in Arts	OPTION 1	9	56%	56%	0%
Network Administration	Certificate-Advanced	OPTION 1	9	56%	56%	0%
Network Programming	Associate in Arts	OPTION 2	9	44%	44%	0%
Network Programming	Certificate-Advanced	OPTION 2	9	44%	44%	0%
Systems Programming	Associate in Arts	OPTION 1	9	33%	44%	-11%
Systems Programming	Certificate-Advanced	OPTION 2	9	33%	44%	-11%
Programming in JAVA	Certificate	OPTION 2	5	40%	40%	0%
UNIX/LINUX Operating System	Certificate	OPTION 1	5	40%	40%	0%
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 2	8	38%	38%	0%
Database Design for Developers (Oracle)	Certificate	OPTION 2	6	67%	33%	33%
Network Programming	Associate in Arts	OPTION 1	9	33%	33%	0%
Network Programming	Certificate-Advanced	OPTION 1	9	33%	33%	0%
Systems Programming	Associate in Arts	OPTION 2	9	22%	33%	-11%
Systems Programming	Certificate-Advanced	OPTION 1	9	22%	33%	-11%
Programming in C/C++	Certificate	OPTION 2	4	25%	25%	0%
Programming in JAVA	Certificate	OPTION 1	5	20%	20%	0%



Program Title	Program Type	Option ID	Total Courses	Prior AY Percent Courses Dist Ed Scheduled	Current AY Percent Courses Dist Ed Scheduled	Difference in Dist Ed Scheduled Percentages
Programming in PERL	Certificate	OPTION 2	5	20%	20%	0%
Database Design for Developers (Oracle)	Certificate	OPTION 1	6	50%	17%	33%
Biological Sciences	Associate in Science	OPTION 2	9	0%	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 1	24	0%	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 2	24	0%	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 1	24	0%	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 2	24	0%	0%	0%
Painting	Associate in Arts	OPTION 1	10	0%	0%	0%
Painting	Associate in Arts	OPTION 2	10	0%	0%	0%
Painting	Certificate-Advanced	OPTION 1	10	0%	0%	0%
Painting	Certificate-Advanced	OPTION 2	10	0%	0%	0%
Programming in C/C++	Certificate	OPTION 1	4	0%	0%	0%
Programming in PERL	Certificate	OPTION 1	5	0%	0%	0%

**Notes:**

Prior AY: Prior academic years, 2011-12 and 2012-13

Current AY: 2013-14 and 2014-15

Program sorted by 'Current Percent Units Dist Ed Scheduled' --higher to lower percent.

**Appendix G. Statistics for Courses Approved or Scheduled for Distance Education at De Anza College by Program and Option, Current and Prior Academic Years**

<b>Program Title</b>	<b>Program Type</b>	<b>Option ID</b>	<b>Total Courses</b>	<b>Prior AY Percent Courses Dist Ed Scheduled</b>	<b>Current AY Percent Courses Dist Ed Scheduled</b>	<b>Difference in Dist Ed Scheduled Percentages</b>
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 1	8	75%	75%	0%
Business Programming	Associate in Arts	OPTION 1	9	78%	67%	11%
Business Programming	Certificate-Advanced	OPTION 2	9	78%	67%	11%
Network Administration	Associate in Arts	OPTION 2	9	67%	67%	0%
Network Administration	Certificate-Advanced	OPTION 2	9	67%	67%	0%
UNIX/LINUX Operating System	Certificate	OPTION 2	5	60%	60%	0%
Business Programming	Associate in Arts	OPTION 2	9	67%	56%	11%
Business Programming	Certificate-Advanced	OPTION 1	9	67%	56%	11%
Network Administration	Associate in Arts	OPTION 1	9	56%	56%	0%
Network Administration	Certificate-Advanced	OPTION 1	9	56%	56%	0%
Network Programming	Associate in Arts	OPTION 2	9	44%	44%	0%
Network Programming	Certificate-Advanced	OPTION 2	9	44%	44%	0%
Systems Programming	Associate in Arts	OPTION 1	9	33%	44%	-11%
Systems Programming	Certificate-Advanced	OPTION 2	9	33%	44%	-11%
Programming in JAVA	Certificate	OPTION 2	5	40%	40%	0%
UNIX/LINUX Operating System	Certificate	OPTION 1	5	40%	40%	0%
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 2	8	38%	38%	0%
Database Design for Developers (Oracle)	Certificate	OPTION 2	6	67%	33%	33%
Network Programming	Associate in Arts	OPTION 1	9	33%	33%	0%
Network Programming	Certificate-Advanced	OPTION 1	9	33%	33%	0%
Systems Programming	Associate in Arts	OPTION 2	9	22%	33%	-11%
Systems Programming	Certificate-Advanced	OPTION 1	9	22%	33%	-11%
Programming in C/C++	Certificate	OPTION 2	4	25%	25%	0%
Programming in JAVA	Certificate	OPTION 1	5	20%	20%	0%

Program Title	Program Type	Option ID	Total Courses	Prior AY Percent Courses Dist Ed Scheduled	Current AY Percent Courses Dist Ed Scheduled	Difference in Dist Ed Scheduled Percentages
Programming in PERL	Certificate	OPTION 2	5	20%	20%	0%
Database Design for Developers (Oracle)	Certificate	OPTION 1	6	50%	17%	33%
Biological Sciences	Associate in Science	OPTION 2	9	0%	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 1	24	0%	0%	0%
Medical Laboratory Technology	Associate in Arts	OPTION 2	24	0%	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 1	24	0%	0%	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 2	24	0%	0%	0%
Painting	Associate in Arts	OPTION 1	10	0%	0%	0%
Painting	Associate in Arts	OPTION 2	10	0%	0%	0%
Painting	Certificate-Advanced	OPTION 1	10	0%	0%	0%
Painting	Certificate-Advanced	OPTION 2	10	0%	0%	0%
Programming in C/C++	Certificate	OPTION 1	4	0%	0%	0%
Programming in PERL	Certificate	OPTION 1	5	0%	0%	0%

**Notes:**

Prior AY: Prior academic years, 2011-12 and 2012-13

Current AY: 2013-14 and 2014-15

Program sorted by 'Current Percent Units Dist Ed Scheduled' --higher to lower percent.

**Appendix H. Statistics for Courses Units Approved or Scheduled for Distance Education at De Anza College by Program and Option, Current and Prior Academic Years**

Program Title	Program Type	Option ID	Prior AY		Current AY		Difference in Units Across Years	Difference in Dist Ed Scheduled Percent
			Total Units	Percent Scheduled	Total Units	Percent Scheduled		
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 1	32	75%	32	75%	0	0%
Network Administration	Associate in Arts	OPTION 2	40.5	67%	40.5	68%	0	1%
Network Administration	Certificate-Advanced	OPTION 2	40.5	67%	40.5	68%	0	1%
Business Programming	Associate in Arts	OPTION 1	41.5	78%	41.5	67%	0	-11%
Business Programming	Certificate-Advanced	OPTION 2	41.5	78%	41.5	67%	0	-11%
UNIX/LINUX Operating System	Certificate	OPTION 2	22.5	60%	22.5	60%	0	0%
Network Administration	Associate in Arts	OPTION 1	31.5	71%	40.5	57%	9	-15%
Network Administration	Certificate-Advanced	OPTION 1	31.5	71%	40.5	57%	9	-15%
Business Programming	Associate in Arts	OPTION 2	32.5	86%	41.5	57%	9	-30%
Business Programming	Certificate-Advanced	OPTION 1	32.5	86%	41.5	57%	9	-30%
Systems Programming	Associate in Arts	OPTION 1	41.5	34%	41.5	46%	0	12%
Systems Programming	Certificate-Advanced	OPTION 2	41	33%	41	45%	0	12%
Network Programming	Associate in Arts	OPTION 2	41	45%	41	45%	0	0%
Network Programming	Certificate-Advanced	OPTION 2	41	45%	41	45%	0	0%
Programming in JAVA	Certificate	OPTION 2	22.5	40%	22.5	40%	0	0%
UNIX/LINUX Operating System	Certificate	OPTION 1	13.5	67%	22.5	40%	9	-27%
Transfer Model Curriculum (History)	Associate in Science-Transfer	OPTION 2	20	60%	32	38%	12	-23%
Database Design for Developers (Oracle)	Certificate	OPTION 2	24.5	73%	24.5	37%	0	-37%
Systems Programming	Associate in Arts	OPTION 2	32.5	29%	41.5	35%	9	6%
Systems Programming	Certificate-Advanced	OPTION 1	32	28%	41	34%	9	6%
Network Programming	Associate in Arts	OPTION 1	32	44%	41	34%	9	-10%
Network Programming	Certificate-Advanced	OPTION 1	32	44%	41	34%	9	-10%

Program Title	Program Type	Option ID	Prior AY		Current AY		Difference in Units Across Years	Difference in Dist Ed Scheduled Percent
			Total Units	Percent Units Dist Ed Scheduled	Total Units	Percent Units Dist Ed Scheduled		
Programming in C/C++	Certificate	OPTION 2	18	25%	18	25%	0	0%
Programming in PERL	Certificate	OPTION 2	22.5	20%	22.5	20%	0	0%
Programming in JAVA	Certificate	OPTION 1	13.5	33%	22.5	20%	9	-13%
Database Design for Developers (Oracle)	Certificate	OPTION 1	15.5	87%	24.5	18%	9	-69%
Biological Sciences	Associate in Science	OPTION 2	48	0%	48	0%	0	0%
Programming in PERL	Certificate	OPTION 1	13.5	0%	22.5	0%	9	0%
Programming in C/C++	Certificate	OPTION 1	9	0%	18	0%	9	0%
Painting	Associate in Arts	OPTION 1	31	0%	31	0%	0	0%
Painting	Associate in Arts	OPTION 2	31	0%	31	0%	0	0%
Painting	Certificate-Advanced	OPTION 1	31	0%	31	0%	0	0%
Painting	Certificate-Advanced	OPTION 2	31	0%	31	0%	0	0%
Medical Laboratory Technology	Associate in Arts	OPTION 1	91	0%	91	0%	0	0%
Medical Laboratory Technology	Associate in Arts	OPTION 2	88	0%	88	0%	0	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 1	91	0%	91	0%	0	0%
Medical Laboratory Technology	Certificate-Advanced	OPTION 2	88	0%	88	0%	0	0%

**Notes:**

Prior AY: Prior academic years, 2011-12 and 2012-13

Current AY: 2013-14 and 2014-15

Program sorted by 'Current Percent Units Dist Ed Scheduled' --higher to lower percent.

Difference in Units: Units for current and prior academic years are provided in this column given that credit units for some courses had changed in the last four years, or the course was not offered. Units are based on the course catalog for the scheduled year.