

## NCE INTERPRETIVE GUIDE 2017

Program Administrators may access summary score reports for the National Certification Examination (NCE) and the Self-Evaluation Examination (SEE) via the NBCR NA website through the Program Administrator's portal. The summary report will contain the results of all currently enrolled students or graduates of the program up to the most recent five years. Neither current students, nor program graduates can request program summary or individual NCE or SEE score reports, as this reporting capability is limited to designated Program Administrators.

The information contained in this guide is intended to provide assistance in interpreting NCE and SEE test takers' scores. The score summaries contained in this document are based on test taker performance in fiscal year 2017 (from September 1, 2016, to August 31, 2017).

### NCE

- Program Administrators:
  - The Program Administrator summary report is in Excel format. The report contains student name, test date, exam number, total scaled score, result (P/F), and content area scaled scores. The content areas are described in detail in the test content outline of the *National Certification Examination (NCE) Candidate Handbook*.
  - To calculate the first-time test taker average for the total scaled score and each content area score for your students, simply sort the Excel spreadsheet by exam number (1 for first-time takers) and sum the candidate scores for your program, both for the total score and for the content area scores, and divide by the number of candidates for your program. Refer to the **NCE Example of Calculating an Average** that appears on the next page of this document. These averages can be compared to the national NCE means (total and content area scores) in Table 1 on page 2.
  - The scaled score is listed for the total test and each of the content areas. The scaled score is a transformation of the examinee's ability score estimated based on their test performance. The scaled scores on the NCE range from 0-900.
  
- Students:
  - Compare your scores to the national NCE means in Table 1 on page 2.

## NCE EXAMPLE OF CALCULATING AN AVERAGE

### Report of NCE Takers for Program 0111 Test Dates 10/1/20XX to 12/1/20XX

Program	Exam	Name	Test Date	Exam No.	Total Score	Result	Score 1	Score 2	Score 3	Score 4	Score 5
0111	CERT	Doe, F	11/19/20XX	1	413	F	410	306	454	419	0
0111	CERT	Doe, M	11/8/20XX	1	446	F	428	443	456	459	0
0111	CERT	Jane, E	11/2/20XX	1	497	P	482	459	499	501	0
0111	CERT	Jane, P	10/26/20XX	1	496	P	571	450	486	488	0
<b>Total</b>					<b>1852</b>		<b>1891</b>	<b>1658</b>	<b>1895</b>	<b>1867</b>	<b>0</b>
<b>Average</b>					<b>463</b>		<b>472</b>	<b>414</b>	<b>473</b>	<b>466</b>	<b>0</b>

(Average = Total Divided by number of test takers; in this case 4)

For individuals testing **on or after** January 1, 2013, please note that a zero (0) will appear in the Score 5 column and the remaining scores will reflect the following content areas:

- Score 1 = Basic sciences
- Score 2 = Equipment, instrumentation and technology
- Score 3 = Basic principles of anesthesia
- Score 4 = Advanced principles of anesthesia
- Score 5 = *Is intentionally left blank on/after January 1, 2013*

**Table 1. Descriptive Statistics for NCE Overall and Domain Scores—First-Time Candidates FY 2017**

	Average	Standard Deviation
Basic Science	498.4	61.0
Equipment, Instrumentation and Technology	501.0	73.0
Basic Principles of Anesthesia	498.6	58.1
Advanced Principles of Anesthesia	488.8	55.9
<b>Overall Score</b>	<b>491.8</b>	<b>44.8</b>

**INTERPRETIVE GUIDE FOR NEW SEE**  
**(for examinees ON or AFTER September 1, 2016)**

The NBCRNA launched the NEW Self-Evaluation Examination (SEE) on September 1, 2016. The revisions to the original SEE that resulted in the New SEE included:

- Adoption of the National Certification Examination (NCE) content outline for question development
- Reporting scores on the four NCE knowledge domains:
  - Basic Sciences
  - Equipment, Instrumentation and Technology
  - Basic Principles of Anesthesia
  - Advanced Principles of Anesthesia
- Lengthening the examination to 240 total questions with a four-hour time limit

The information contained in this guide is intended to provide assistance in interpreting test takers' scores arising from the new reconfigured SEE. This interpretive guide is based on the results data of test takers who took the new SEE from September 2016 through August 2017. Students and Program Administrators may use these instructions to compare SEE performance using the data tables contained within this guide. **This guide should only be used for interpreting scores from SEE administrations on or after September 1, 2016.**

- Program Administrators:
  - The Program Administrator summary report is in Excel format. The report contains student name, test date, year in program, total scaled score, and content area scaled scores from 1-4. The content areas are described in detail in the test content outline of the *Self-Evaluation Examination (SEE) Candidate Handbook*.
  - The scaled score is listed for the total test and each of the content areas. The scaled score is a transformation of the examinee's demonstrated ability measure. The scaled scores on the SEE range from 300-600.
  - To calculate the average for the SEE total scaled score and each content area score for your students, simply sum the candidate scores for your program, both for the total score and for the content area scores, and divide by the number of candidates for your program. Refer to the *SEE Example of Calculating an Average* that appears below.
  - These averages can be compared to the national SEE averages in Table 1 below and to the cumulative percentage tables starting on page 5.

## SEE EXAMPLE OF CALCULATING AN AVERAGE

### Report of SEE Takers for Program 0111 Test Dates 7/1/20XX to 7/31/20XX

Program	Exam	Name	Test Date	Year in Program	Total Score	Score 1	Score 2	Score 3	Score 4	Score 5
0111	NSEE	Doe, F	7/13/20XX	1	464	426	460	459	440	0
0111	NSEE	Doe, M	7/28/20XX	1	379	411	358	351	404	0
0111	NSEE	Jones, F	7/27/20XX	1	350	380	459	321	389	0
0111	NSEE	Jones, M	7/28/20XX	1	376	368	357	391	329	0
<b>Total</b>					<b>1569</b>	<b>1585</b>	<b>1634</b>	<b>1522</b>	<b>1562</b>	
<b>Average</b>					<b>392</b>	<b>396</b>	<b>408</b>	<b>380</b>	<b>390</b>	

(Average = Total Divided by number of test takers; in this case 4)

The scores reflect the following content areas:

Score 1 = Basic Sciences

Score 2 = Equipment, Instrumentation and Technology

Score 3 = Basic Principles of Anesthesia

Score 4 = Advanced Principles of Anesthesia

Score 5 = *Is intentionally left blank on/after September 1, 2016.*

**Table 1. Descriptive Statistics for SEE Overall and Domain Scores, September 2016 – August 2017**

	1 <sup>st</sup> Year (N=159)		2 <sup>nd</sup> Year (N=735)		3 <sup>rd</sup> Year (N=535)		All (N=1429)	
	Avg	SD	Avg	SD	Avg	SD	Avg	SD
Basic Sciences	398.8	44.8	397.6	46.9	404.7	49.2	400.8	47.9
Equipment, Instrumentation and Tech.	398.6	46.4	403.9	48.2	409.8	47.6	406.0	47.9
Basic Principles of Anesthesia	396.4	48.8	407.2	49.3	413.5	49.6	409.0	49.7
Advanced Principles of Anesthesia	382.4	47.6	406.5	49.3	416.8	49.4	409.0	50.1
<b>Overall Score</b>	<b>393.0</b>	<b>40.9</b>	<b>402.9</b>	<b>42.9</b>	<b>410.3</b>	<b>43.6</b>	<b>405.3</b>	<b>43.3</b>

- Students:
  - Compare your scores to the cumulative percentage tables starting on page 5.

**CUMULATIVE PERCENTAGE TABLES: SEE**

At the top of the following pages, the main headings list each of the content areas and the total test score. You can compare your individual or your students' performance with other students for each of these content areas by finding the appropriate heading.

Under each main heading you will see groups of columns with subheadings as in the following example:

**Basic Sciences**

	Year 1 Cum %	Year 2 Cum %	Year 3&Up Cum %	All Cum %
401-410	61.5	62.5	56.7	59.9
411-420	68.3	69.6	64.4	67.2
421-430	76.0	76.2	71.8	74.2
431-440	82.0	81.8	77.1	79.7
441-450	88.8	86.6	82.5	85.0

To compare a score on "Basic Sciences," locate the column on your Program Administrator report labeled score 1 and find the student's scaled score. If the student's scaled score on this content area was 405, you would look down the first column on the cumulative percentage table for "Basic Sciences" until you found the score range of 401-410. The next column to the right, labeled "Year 1 Cum. %," lists the corresponding cumulative percentage of 61.5 for all first-year examinees. The 62.5 in the next column is the cumulative percentage for all second-year examinees. The 56.7 in the next column is the cumulative percentage for all third-year and beyond examinees. The corresponding cumulative percentage of 59.9 for all examinees at that scaled score value is listed in the far-right column labeled "All Cum. %." This means that with a scaled score of 405 on "Basic Sciences," your student scored higher than or equal to 59.9% of all examinees on that content area.

Students should use these tables in the same manner as Program Administrators to interpret their individual SEE performance across the content areas and total test.

**Score 1: Basic Sciences**

	Year 1 Cum %	Year 2 Cum %	Year 3&Up Cum %	All Cum %
300-310	4.1	3.1	2.5	2.9
311-320	5.3	5.3	4.2	4.8
321-330	7.1	8.4	6.5	7.4
331-340	9.2	11.9	9.9	10.8
341-350	13.3	16.1	12.7	14.3
351-360	19.2	21.8	18.6	20.2
361-370	24.9	28.8	25.6	27.0
371-380	32.5	36.0	31.5	33.7
381-390	42.6	44.5	39.1	42.0
391-400	51.5	53.1	47.5	50.5
401-410	61.5	62.5	56.7	59.9
411-420	68.3	69.6	64.4	67.2
421-430	76.0	76.2	71.8	74.2
431-440	82.0	81.8	77.1	79.7
441-450	88.8	86.6	82.5	85.0
451-460	92.9	90.5	87.2	89.2
461-470	96.5	93.0	90.4	92.2
471-480	97.9	95.3	93.1	94.5
481-490	98.2	97.0	95.3	96.3
491-500	98.5	98.5	96.4	97.6
501-510	98.5	99.2	97.5	98.4
511-520	98.8	99.6	98.5	99.1
521-530	99.4	99.7	99.1	99.4
531-540	99.7	99.9	99.7	99.8
541-550	100.0	100.0	99.8	99.9
551-560	100.0	100.0	99.9	100.0
561-570	100.0	100.0	100.0	100.0
571-580	100.0	100.0	100.0	100.0
581-590	100.0	100.0	100.0	100.0
591-600	100.0	100.0	100.0	100.0

**Score 2: Equipment, Instrumentation and Technology**

	Year 1 Cum %	Year 2 Cum %	Year 3&Up Cum %	All Cum %
300-310	3.3	3.4	2.0	2.8
311-320	4.4	4.8	3.3	4.1
321-330	8.6	6.6	4.9	6.0
331-340	11.2	9.1	7.7	8.6
341-350	14.5	12.9	11.4	12.4
351-360	20.1	18.5	15.8	17.4
361-370	26.6	25.2	21.8	23.8
371-380	34.6	32.3	27.7	30.5
381-390	43.5	40.3	34.2	37.8
391-400	51.5	47.4	43.0	45.8
401-410	60.7	56.0	50.6	54.0
411-420	70.1	64.0	58.8	62.2
421-430	76.6	71.3	66.4	69.6
431-440	81.7	77.9	72.7	75.9
441-450	87.0	83.3	80.4	82.3
451-460	89.9	87.4	84.8	86.5
461-470	93.2	90.7	89.6	90.4
471-480	95.9	93.8	92.8	93.5
481-490	97.9	95.6	95.6	95.8
491-500	97.9	97.6	97.5	97.6
501-510	98.8	98.6	98.4	98.5
511-520	99.4	99.4	99.3	99.4
521-530	99.7	99.8	99.7	99.7
531-540	99.7	99.8	99.8	99.8
541-550	99.7	99.9	99.9	99.9
551-560	100.0	100.0	99.9	100.0
561-570	100.0	100.0	100.0	100.0
571-580	100.0	100.0	100.0	100.0
581-590	100.0	100.0	100.0	100.0
591-600	100.0	100.0	100.0	100.0

**Score 3: Basic Principles of Anesthesia**

	Year 1 Cum %	Year 2 Cum %	Year 3&Up Cum %	All Cum %
300-310	4.7	2.6	1.7	2.4
311-320	6.5	3.8	2.8	3.6
321-330	9.2	5.6	3.9	5.1
331-340	12.4	8.4	5.6	7.5
341-350	17.8	11.7	8.5	10.8
351-360	22.8	17.0	13.1	15.8
361-370	30.2	23.7	18.6	22.0
371-380	40.2	31.7	25.5	29.7
381-390	47.9	38.0	33.5	36.9
391-400	54.1	46.2	42.3	45.2
401-410	62.4	53.5	50.3	52.9
411-420	68.6	61.1	58.0	60.4
421-430	75.7	69.2	66.1	68.4
431-440	79.6	75.7	72.7	74.8
441-450	84.9	81.4	78.2	80.3
451-460	88.2	86.0	82.7	84.7
461-470	92.6	89.9	86.6	88.7
471-480	96.5	92.3	90.5	91.9
481-490	98.8	94.7	93.3	94.4
491-500	99.1	96.2	95.0	95.9
501-510	99.1	97.8	96.7	97.5
511-520	99.7	98.6	97.5	98.2
521-530	99.7	99.0	98.3	98.7
531-540	99.7	99.5	99.0	99.3
541-550	100.0	99.8	99.4	99.6
551-560	100.0	99.8	99.7	99.8
561-570	100.0	99.9	99.7	99.8
571-580	100.0	99.9	99.9	99.9
581-590	100.0	100.0	99.9	100.0
591-600	100.0	100.0	100.0	100.0

**Score 4: Advanced Principles of Anesthesia**

	Year 1 Cum %	Year 2 Cum %	Year 3&Up Cum %	All Cum %
300-310	7.4	2.6	1.1	2.3
311-320	9.8	4.2	1.7	3.6
321-330	15.4	6.2	4.1	6.1
331-340	22.2	9.0	6.5	9.0
341-350	27.2	12.7	8.8	12.2
351-360	34.9	18.4	12.7	17.3
361-370	41.1	23.8	17.0	22.3
371-380	46.5	30.4	24.2	29.0
381-390	56.5	37.1	30.8	36.0
391-400	66.9	45.6	39.3	44.7
401-410	74.9	54.3	46.4	52.6
411-420	79.6	62.2	53.7	60.0
421-430	85.2	69.5	61.6	67.4
431-440	88.5	75.9	68.0	73.5
441-450	92.3	81.5	74.9	79.5
451-460	95.3	86.3	81.6	85.0
461-470	96.2	89.9	85.7	88.6
471-480	97.0	93.2	89.4	91.9
481-490	97.9	95.2	92.4	94.2
491-500	99.1	96.4	95.0	96.0
501-510	99.4	97.9	96.6	97.5
511-520	99.7	98.6	98.1	98.5
521-530	99.7	99.2	98.6	99.0
531-540	99.7	99.4	99.2	99.4
541-550	99.7	99.7	99.5	99.6
551-560	99.7	99.8	99.9	99.8
561-570	99.7	99.9	100.0	99.9
571-580	100.0	99.9	100.0	100.0
581-590	100.0	100.0	100.0	100.0
591-600	100.0	100.0	100.0	100.0

**Overall Scaled Score for Total Test**

	Year 1 Cum %	Year 2 Cum %	Year 3&Up Cum %	All Cum %
300-310	3.3	1.9	0.9	1.6
311-320	4.7	3.3	1.6	2.7
321-330	6.5	4.7	3.2	4.2
331-340	9.5	7.1	5.1	6.4
341-350	14.2	10.4	7.7	9.5
351-360	21.3	15.4	11.9	14.4
361-370	28.7	21.7	18.4	20.8
371-380	37.6	30.7	25.1	28.8
381-390	47.0	39.3	33.3	37.3
391-400	56.5	48.9	42.6	46.8
401-410	67.5	58.3	51.4	56.0
411-420	75.4	66.5	60.1	64.5
421-430	82.8	74.5	68.9	72.7
431-440	87.3	80.5	75.8	79.0
441-450	92.0	86.3	82.4	85.1
451-460	95.9	90.6	86.8	89.4
461-470	96.8	93.4	91.1	92.7
471-480	98.2	96.3	94.0	95.5
481-490	98.5	97.8	95.7	97.0
491-500	99.4	98.7	97.6	98.3
501-510	99.7	99.4	98.5	99.0
511-520	100.0	99.7	99.4	99.6
521-530	100.0	99.9	99.9	99.9
531-540	100.0	100.0	99.9	100.0
541-550	100.0	100.0	100.0	100.0
551-560	100.0	100.0	100.0	100.0
561-570	100.0	100.0	100.0	100.0
571-580	100.0	100.0	100.0	100.0
581-590	100.0	100.0	100.0	100.0
591-600	100.0	100.0	100.0	100.0