

Table 7 – Assessment-level indicators from the assessment tools (Assessments I–IV) used in the Descriptive Biochemistry course from 2021 to 2024.

The course was delivered entirely online in 2021 (values in gray). The total number of students who took the course during each year is shown in parentheses.

Indicator	Assessment	2021 (644)	2022 (632)	2023 (738)	2024 (674)	TOTAL (2688)
Attendance (%)	I	98	98	100	98	99 a
	II	90	83	85	95	88 b
	III	88	80	85	88	85 b
	IV	97	93	92	96	95 a
Reliability (%)	I	37	38	42	44	40 a
	IV	78	77	77	80	78 b
Skewness	I	-0,43	-0,39	-0,16	-0.62	-0.40
	II	-0,74	-0,43	-0,03	-0.03	-0.31
	III	-0,35	-0,48	-0,28	-0.86	-0.49
	IV	0,11	0,55	0,55	0.52	0.43
Mean score (% $\pm$ s.e.m.)	I	65 $\pm$ 5	58 $\pm$ 6	62 $\pm$ 6	67 $\pm$ 7	63 $\pm$ 4 a
	II	68 $\pm$ 8	62 $\pm$ 11	62 $\pm$ 10	60 $\pm$ 10	63 $\pm$ 5 a
	III	68 $\pm$ 7 ab	60 $\pm$ 6 a	68 $\pm$ 6 ab	72 $\pm$ 6 b	67 $\pm$ 5 a
	IV	56 $\pm$ 6	48 $\pm$ 7	48 $\pm$ 6	56 $\pm$ 5	52 $\pm$ 4 b
% above passing threshold	I	73 *	62 *	66	74	69 a
	II	80 a	74 ab	68 b	70 ab	73 a
	III	82	74	79	89	81 b
	IV	63 a	40 b	39 b	60 a	51 c
% above exemption threshold	I	43 a	33 b	40 a	50 a	42 a
	II	50 a	36 b	39 b	31 b	39 a
	III	39 a	29 b	41 a	54 c	41 a
	IV	15 a	8 b	7 b	17 a	12 b

Indicator definitions:

Attendance (%): Proportion of students who participated in the course and completed each assessment.

Reliability (%): Internal consistency (Cronbach's alpha).

Skewness: Asymmetry of the score distribution.

Mean score (% $\pm$ SEM): Average score with standard error of the mean.

% above passing threshold: Proportion of students scoring >50%.

% above exemption threshold: Proportion of students scoring >75%.

Statistical notes: Within each row, different superscript letters indicate statistically significant differences ($P < 0.05$). Asterisk indicate marginal significance: $P = 0.061$.