

Sub-committee for the Academic Standards Committee.

QUESTION TO BE EXAMINED: Is there a significant variation among grade distributions of the various teachers and departments on our Faculty?

PURPOSE: To propose a method for establishing a non-discriminatory honor roll.

AREAS TO BE STUDIED:

1. The distribution of grades by teachers.
2. The distribution of grades received by students.
3. The distribution of courses by students among:
 - a. Block requirements
 - b. Major and minor courses.

(NOTE: While an analytical description of No. 1 might reveal qualitative differences in grading practices, the real significance of such differences to the students would not be clear without a study of No.s 2 and 3. It is the student's total record, not the faculty member's grades, which are the basis for honor roll selection.)

AREA STUDIED TO DATE: Number 1, in the following manner and degree --

- A. The 'summary grade sheets' (class roll with final semester grades for each student) for every teacher of every class for the 8 semesters and 3 summer sessions between September, 1947 and through June, 1951, were obtained from the Registrar's Office. This represented at least a 90% coverage of all grades given during that period, and were the most accessible, most mobile data available.

This coverage included some of the inflated post-war, as well as the de-flated post-Korean enrollments with their respective faculty and student characteristics.

The estimated coverage - 90% - is not based on verification against courses scheduled.

- B. Each grade sheet was sorted under departmental rubrics and according to levels of 100, 200, etc. The distribution of letter grades was then recorded on grids according to the departmental-class level classification for every teacher. (These first work-sheets are available for anyone interested in the intra-departmental distributions.)
- C. Summaries were then made of all the letter grades by class-level for each department, and for the entire 11 sessions. The summaries became a quantitative distribution of letter grades by departments, but were inadequate to measure relative values.
- D. For comparative purposes it was essential to convert the distributions into standard scores and compute their relative values, using the total practice for the comparative base.
- E. The resultant computations are attached in a four-page tabular summary. Some inclusions or combinations will be noted there as well as some exclusions. "f" is to be read as the frequency distribution of letter grades, SS, as the standard scores, and RV as the relative values as compared with the total distribution found on Page One. In that distribution the values of A, B, C, D, and F are 3, 2, 1, 0 and -1 respectively. The mean and standard deviation of each distribution are also given.

RECOMMENDATIONS: If the Academic Standards Committee wishes to consider the above evidence as sufficient to support an affirmative assumption of existing qualitative variation among grades of each department, the Sub-committee is prepared to propose: (provisionally)

- A. The formation of an honor roll classified by degree applied for,
- B. To be comprised of the 90th percentile of current enrollment,
- C. The computation to be based on a once-a-year, mid-year cumulative basis,
- D. Potential members to be either part- or full-time students.

Respectfully submitted for the Sub-committee,
J. F. Swartz
P. E. Botty

ABSOLUTE and RELATIVE DISTRIBUTION OF GRADES given by Youngstown College Faculty for the 8 SEMESTERS and 3 SUMMER SESSIONS from September 1947 through June, 1951, taken from Summary Grade Sheets for Courses arranged by Class Level and Department. The relative values are derived from converting distributions of the total grades and departmental grades into standard scores. February, 1952 - Prepared for the Academic Standards Committee by J.F. Swartz and P.E. Betty

A. GRAND TOTAL PRACTICE					B. TOTAL PRACTICE		1. ACCOUNTING			2. ART				
Number	Per Cent	S.S.	Value		Frequency	Stan. Score	f	SS	Relative Value	f	SS	RV		
A	19,615	17.17	64.4	3	100s	5,169	65.7			390	59.7	2.36	A	
B	37,581	32.90	54.7	2		11,618	56.4			383	49.4	1.25	B	
C	38,225	33.46	45.1	1		14,396	47.0			183	38.9	.14	C	
D	9,719	8.51	35.4	0		4,324	37.6			24	28.7	-.95	D	
F	5,417	4.74	25.8	-1		2,700	28.3			32	18.4	-2.06	F	
"M"	114,225(t)	100.0					1.509					2.062	M	
σ	3,668 Es	3.21					1.036					.97	sigma	
A					200s	5,770	64.9	560	63.0	2.80	293	57.9	2.28	A
B						11,409	55.2	637	54.8	1.96	185	44.1	0.86	B
C						12,574	45.5	791	46.5	1.10	52	30.4	-.56	C
D						3,341	35.8	243	38.3	0.26	2	16.6	-1.98	D
F						1,682	26.1	233	30.0	-.60	2	2.9	-3.39	F
"M"							1.46			1.42		2.42	M	
σ							1.03			1.21		.72	sigma	
A					300s	6,038	63.3	274	65.5	3.22	482	57.1	2.38	A
B						9,982	53.3	575	55.7	2.24	273	44.7	1.15	B
C						8,659	43.2	576	45.9	1.27	65	32.3	-.08	C
D						1,784	33.1	164	36.1	0.30	7	19.9	-1.31	D
F						897	23.1	123	26.3	-.68	14	7.5	-2.55	F
"M"							1.67			1.41		2.42	M	
σ							.99			1.02		.80	sigma	
A					400s	2,638	62.7	403	62.8	3.01	12	57.6	2.56	A
B						4,572	51.0	751	51.6	2.05	9	46.9	1.65	B
C						2,596	39.4	420	40.3	1.08	2	36.2	.73	C
D						270	27.7	58	29.0	0.11	0	25.5	-.19	D
F						138	10.0	32	17.8	-.85	1	14.8	-1.10	F
"M"							1.91			1.86		2.29	M	
σ							.85			.88		.93	sigma	

NOTE: The E's have not been computed throughout.
 The 114,225 grades recorded include more than 90% of all grades given during that period.
 Grades deliberately excluded were the Music Ensembles and Gymnasium Courses of the P. Ed. Department.

3. BUS ORG-ADV-MERCH.				4. EDUCATION			5. ENGL -HUM - SP			6. LANGUAGE			7. ENGINEERING			8. MATHEMATICS		
f	SS	Rv		f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV
A	523	63.6	2.79	134	65.1	2.94	1209	66.6	3.10	227	65.0	2.93	136	66.2	3.05	424	66.4	3.07
B	1036	54.3	1.78	371	55.2	1.87	3186	57.0	2.06	479	56.4	2.00	305	54.7	1.82	708	57.6	2.13
C	852	45.0	.79	342	45.3	.82	3789	47.3	1.03	528	47.8	1.09	352	43.1	0.58	1326	43.9	1.20
D	230	35.7	-.20	63	35.4	.23	860	37.7	0.0	187	39.1	0.16	35	31.5	-.65	419	40.1	.27
F	174	26.4	-1.20	59	25.5	-1.30	542	28.0	-1.03	167	30.5	-.77	32	19.9	-1.88	362	31.4	-.67
M		1.53			1.47			1.27			1.25			1.59				1.12
F		1.07			1.01			1.03			1.16			.86				1.14
A	1823	64.3	2.94	111	61.6	2.66	372	67.1	3.23	208	63.7	2.88	315	63.6	2.87	135	68.1	3.33
B	3518	53.5	1.82	161	49.1	1.37	1069	57.1	2.20	401	53.2	1.79	550	53.7	1.85	320	58.2	2.31
C	2880	42.7	.71	69	36.6	.08	1426	47.0	1.15	315	42.6	.70	508	43.8	0.82	587	48.4	1.30
D	639	32.0	-.39	2	24.1	-1.21	397	37.0	.12	54	32.1	-.38	84	33.9	-.20	197	38.6	.29
F	327	21.2	-1.51	4	11.6	-2.49	197	27.0	-.91	29	21.6	-1.46	67	24.0	-1.22	82	28.7	-.73
M		1.67			2.07			1.29			1.70			1.63				1.16
F		.92			.80			.99			.95			1.01				1.01
A	1020	60.4	2.71	656	62.8	2.95	246	61.6	2.83	81	61.1	2.78	787	64.0	3.07	86	68.3	3.50
B	1126	49.1	1.58	1215	50.7	1.74	358	51.7	1.84	118	46.5	1.32	1497	53.7	2.04	188	58.1	2.48
C	528	37.8	.46	587	38.6	.54	207	41.8	.86	20	31.9	-.11	1376	43.5	1.03	371	47.9	1.47
D	62	26.5	-.66	69	26.5	-.66	50	31.9	-.12	4	17.3	-1.57	224	33.2	.10	116	37.7	.46
F	45	15.1	-1.80	26	14.4	-1.86	31	22.0	-1.11	0	2.7	-3.03	151	23.0	-1.10	40	27.6	-.55
M		2.08			1.94			1.82			2.23			1.63				1.20
F		.88			.82			1.00			.68			.97				.98
A	287	61.6	2.91	453	61.0	2.86	179	61.0	2.85				444	61.8	2.92	31	67.2	3.39
B	397	48.1	1.75	606	48.8	1.81	224	50.0	1.91				557	50.2	1.93	85	56.1	2.44
C	154	34.7	.60	223	36.7	.77	123	38.9	.96				362	38.5	.92	107	45.1	1.49
D	2	21.3	-.55	36	24.6	-.27	9	27.8	.01				39	26.8	-.08	23	34.0	.54
F	4	7.9	-1.69	10	12.5	-1.30	12	16.7	-.94				8	15.1	-1.08	6	23.0	-.40
M		2.13			2.09			2.00						1.98				1.44
F		.74			.82			.90						.85				.90

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9. PHYSICS			10. MUSIC			11. PHILOSOPHY			12. PHYSICAL EDUCATION			13. BIOLOGY			14. CHEMISTRY			
f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	
A	128	64.9	2.91	176	62.9	2.70			216	63.6	2.78	228	68.5	3.30	194	69.9	3.45	
B	338	53.6	1.70	244	54.1	1.75			504	52.8	1.62	563	58.7	2.25	538	59.9	2.37	
C	241	42.3	.50	232	45.4	.83			295	42.1	.48	307	48.9	1.20	1270	49.9	1.31	
D	43	31.0	-.70	74	36.7	-.10			56	31.3	-.67	393	39.1	.16	435	39.8	.23	
F	15	19.5	-1.92	56	28.0	-1.03			33	20.6	-1.82	351	29.3	-.89	223	29.8	-.84	
M		1.68								1.73			1.11				1.01	
σ		.88								.93			1.02				.99	
A	121	69.0	3.42	172	62.8	2.78	58	66.1	3.12	80	61.8	2.68	136	65.3	3.04	26	69.2	3.44
B	303	59.1	2.40	262	52.3	1.70	99	56.5	2.13	130	52.8	1.75	324	55.1	1.99	151	58.2	2.31
C	660	49.1	1.37	206	41.7	.61	141	46.8	1.13	80	43.7	.81	345	44.8	.93	197	47.2	1.18
D	207	39.2	.35	33	31.2	-.47	67	37.2	.14	14	34.7	-.11	55	34.6	-.12	42	36.2	.04
F	109	29.3	-.67	16	20.6	-1.57	12	27.5	-.86	24	25.6	-1.05	42	24.3	-1.19	24	25.2	-.91
M		1.08			1.78			1.32			1.69			1.82				1.25
σ		1.00			.94			1.03			1.10			.97				.91
A	34	63.9	3.06	291	62.4	2.91	45	66.3	3.30	230	63.7	3.04	77	62.0	2.87	105	65.5	3.22
B	65	55.1	2.18	433	51.7	1.84	95	57.0	2.37	446	53.0	1.97	130	51.9	1.85	265	56.0	2.27
C	69	46.2	1.30	303	41.0	.78	126	47.6	1.44	342	42.3	.91	73	41.5	.83	288	46.6	1.34
D	22	37.3	.42	52	30.4	-.27	55	38.2	.51	55	31.5	-.16	10	31.3	-.18	76	37.1	.40
F	12	28.4	-.47	21	19.7	-1.34	21	28.9	-.42	28	20.8	-1.23	12	21.1	-1.20	57	27.7	-.54
M		1.43			1.83			1.25			1.72			1.82				1.36
σ		1.12			.93			1.07			.93			.97				1.05
A				131	63.7	3.09	37	60.7	2.83	209	59.5	2.73	63	60.7	2.83	53	62.3	2.97
B				253	52.6	2.14	30	50.3	1.94	214	43.5	1.36	78	46.7	1.63	87	46.4	1.61
C				180	41.5	1.16	27	39.9	1.04	22	27.6	-.01	20	32.6	.42	17	30.4	.23
D				33	30.4	.23	5	29.6	.16	0	11.7	-1.37	0	18.6	-.79	0	14.5	-1.13
F				9	19.3	-.72	1	19.2	-.73	2	-4.3	-2.74	1	4.6	-1.98	0	-1.3	-2.48
M					1.76			1.97			2.40			2.23				2.22
σ					.90			.96			.62			.71				.62

15. SOCIAL SCIENCE (100) 16. ECONOMICS (200, etc.)			17. HISTORY			18. POLITICAL SCIENCE			19. PSYCHOLOGY			20. SOCIOLOGY			21. MISC NAT SCIENCE 1- 22. HOME ECONOMICS 1-20			
f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	f	SS	RV	
A	649	62.1	3.26	116	66.7	3.11						391	64.6	2.88				
B	1996	59.1	2.18	263	56.1	1.97						681	55.9	1.95				
C	2989	48.1	1.12	344	45.5	.84						738	47.2	1.02				
F	1070	38.2	.06	101	34.9	-.29						335	38.6	.11				
F	445	28.2	-1.01	18	24.3	-1.43						191	29.9	-.83				
M		1.16			1.42									1.31				
σ		1.00			.94									1.15				
XXXXXXXXXXXXXXXXXXXXXXXXXXXX																		
A	6	69.6	3.48	631	67.0	3.22	16	68.6	3.38	568	66.3	3.14	27	69.5	3.47	86	63.3	2.84
B	40	53.5	1.82	1642	56.9	2.18	104	58.2	2.31	1284	56.4	2.12	92	59.2	2.41	128	51.0	1.57
C	18	37.3	.15	2145	46.7	1.12	110	47.8	1.24	1776	46.5	1.10	152	48.9	1.35	116	38.7	.30
D	1	21.2	-1.51	737	36.6	.06	39	37.4	.16	429	36.7	.09	71	38.6	.29	28	26.4	-.97
F	0	5.2	-3.15	216	26.4	-.97	18	27.0	-.91	240	26.8	-.93	18	28.3	-.77	18	14.1	-2.24
M		1.78			1.32			1.21		1.35			1.10				1.91	
σ		.62			.98			.96		1.01			.97				.81	
XXXXXXXXXXXXXXXXXXXXXXXXXXXX																		
A	269	69.3	3.60	345	63.0	2.97	201	60.7	2.74	785	64.2	3.09	19	68.4	3.51	28	59.1	2.30
B	1023	58.1	2.48	507	53.1	1.98	204	49.7	1.64	1365	54.0	2.07	99	58.4	2.51	22	46.0	.90
C	1603	46.9	1.37	434	43.2	1.00	137	38.8	.56	1436	43.8	1.06	118	48.4	1.52	8	32.9	-.50
D	375	35.7	.26	130	33.2	.01	15	27.8	-.53	255	33.5	.04	43	38.4	.53	1	19.9	-1.89
F	121	24.5	-.86	35	23.3	-.98	8	16.9	-1.62	129	23.3	-.98	23	28.4	-.47	0	6.8	-3.29
M		1.27			1.68			2.02		1.61			1.15				2.30	
σ		.89			1.00			.91		.97			1.00				.76	
A	172	67.9	3.45				12	65.2	3.21	115	65.5	3.24	36	63.7	3.09	26	54.8	1.96
B	886	54.7	2.32				26	54.8	2.33	304	52.8	2.15	53	54.4	2.29	9	41.5	.59
C	625	41.5	1.18				29	44.4	1.43	218	40.1	1.06	63	45.2	1.50	0	28.2	-.73
D	41	28.3	.05				4	34.0	.54	8	27.4	-.03	12	36.0	.71	0	14.9	-2.15
F	30	15.1	-1.08				3	23.6	-.35	8	14.7	-1.11	11	26.8	-.08	1	1.5	-3.54
M		1.64						1.54		1.78			1.52				2.63	
σ		.75						.96		.78			1.08				.75	