If You Fail This Course, You Will Not Return!
An Analysis of Return Rates by Whether First-Year Freshmen Passed or Failed Particular Courses, 2007-2012
LaGuardia Community College

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Certain courses have low pass rates. What happens to students who fail courses in their first year? Is the failure of certain courses more likely to lead to a student not returning the next year?

We looked at all the courses Fall, first-time students took in their first year from 2007 to 2012. We added up the results over this time period. In these six years, for example, over 10,000 students took ENG 101. We did not examine courses with total six-year enrollments below 100.

We then looked at whether these fall, first-time students returned the next fall. Although some of those who did not return were only stopping out, we will use the shorthand term "Drop Out" for those who did not return for a second fall semester.

We then disaggregated the course-by-course drop-outs by whether they passed the course, failed the course, and, if failed, whether they failed the course with a WU or with some other failure grade.

The results give us some insight into the degree to which some of our courses act as filters. Failing these courses appears to be particularly dispiriting and more likely to lead a student to stop attending.

Top Tens

Table 1 shows three "top tens": the ten courses with the highest total enrollments of first-semester, first-time students in their first year (fall and spring semesters for six years, beginning Fall 2007); the ten courses with the highest number of drop outs (non-enrollment in the following Fall semester) and the ten courses with the highest drop-out *rates*.

Four of the most highly enrolled courses are, of course, developmental, and one is a freshman seminar. The courses with the highest enrollments have, pretty much, the highest numbers of students who failed to show up for the next fall semester. (Yes, there is double and triple counting here, because a student enrolled in three of those courses who failed to show up the next fall would be counted as both enrolled and dropped out in all three.) There are exceptions. Math 096 has a higher enrollment than Math 095, but Math 095 produced more students who

failed to return. English 102 (Writing through Literature) is high in enrollment but is not one of the top ten drop-out producers, while HUP 102 (Philosophy of Creative Thinking) is lower in enrollment, but moves up into the top ten drop-out producers. Both FSM 001 and SSY 101 (General Psych) have higher than expected numbers of drop outs based on enrollments.

Course	Enroll
ENG 101	10,207
MAT 096	6,406
MAT 095	5,531
ENG 102	5,013
SSY 101	4,948
ENG 099	4,480
CSE 099	4,289
SSS 100	3,683
FSM 001	3,182
HUP 102	3,065

Course	Drop Outs
ENG 101	3,230
MAT 095	2,217
MAT 096	2,003
ENG 099	1,518
SSY 101	1,442
CSE 099	1,417
FSM 001	1,143
HUP 102	1,104
SSS 100	1,097
ENG 102	1,067

Course	DO Rate
ENA 099	43%
MAT 095T	42%
ENG 098	42%
FSM 040	40%
ENC 101	40%
MAT 095	40%
MAT 096T	40%
ENA 101	38%
FSM 039	38%
FSE 001	38%

Table 1

Drop-out *rates*, however, do not depend on enrollment. Nevertheless, five of the courses with the highest next fall semester non-return rates are developmental, and three are freshman seminars. The prevalence of "non-vanilla" courses is also interesting and may indicate the greater risk inherent in the enrollment design of these variations: ENC, ENA, FSM, MAT 095T and MAT 096T.

Table 2 splits each course's drop outs into those who passed and those who failed the course and shows the drop-out rates within these subgroups and the differences between these rates, giving the top ten in each category. Pass and fail drop-out rates are calculated based only on

the number who pass and fail respectively. This means that each is the probability of dropping out, if you pass and if you fail.

The top ten in numbers who pass or fail and drop out are similar to the enrollment ranking. One important exception is CSE 095, which, although it is not a top enrollment course, is high in the number of students who *pass and then do not return.* Looking at the pass and then drop-out numbers, one is tempted to say that passing low-level developmental courses and, for many students, even passing freshman seminar, is not a positive experience. This is even more strongly brought home by the drop-out *rate* of students passing the course. Eight of the top ten are either low-level developmental courses or freshman seminar courses, and the ninth is ENA 099. Passing HUM 146 (Audio Recording) also does not appear to be particularly positive.

Course	Pass & Drop Out	Course	Fail & Drop Out		
ENG 101	1,884	ENG 101	1,346		
SSY 101	945	MAT 095	1,317		
MAT 095	900	MAT 096	1,281		
CSE 099	838	ENG 099	829		
FSM 001	781	CSE 099	579		
MAT 096	722	HUP 102	504		
ENG 102	706	SSY 101	497		
ENG 099	689	SSS 100	452		
SSS 100	645	FSM 001	362		
CSE 095	642	ENG 102	361		
Course	**If Pass Drop Out Rate**	**Course**	**If Fail Drop Out Rate**	**Course**	**If Fail DO - if Pass DO Rate**
HUM 146	35%	HUC 170	86%	HUC 170	61%
MAT 095T	35%	FSM 035	79%	HUL 100	53%
FSM 040	34%	FSM 040	75%	CIS 100	51%
ENA 099	34%	HUL 100	72%	SCH 210	50%
ENG 098	34%	HUC 270	69%	FSM 035	50%
FSE 001	33%	SCH 210	69%	HUM 104	47%
CSE 095	32%	ENA 101	69%	LIB 110	47%
FSM 039	31%	FSM 039	69%	HUC 104	47%
ESL 097	30%	ENG 098	68%	HUA 104	46%
FSM 001	30%	LRC 103	68%	SSJ 101	46%

Table 2

In Table 2 we also list the highest drop-out rates for those students who fail a course. This is our first cut at looking at courses that appear to be acting as filters. A filter would be a course that somehow conveys, “If you fail this course, perhaps you don’t belong here.” Three of these

courses are freshman seminars. HUC 170 (Art of Theatre) tops the list. Low level developmental English (ENG 098) is also on the list. Other apparent filtering courses are HUL 100 (Communication of Non-native Speakers), HUC 270 (American Film), SCH 210 (Human Sexuality), ENA 101, and LRC 103 (Internet Research Strategies). Although failing Human Sexuality must be a bad experience, we also wonder whether advisors working with apparently unmotivated students recommend this course, and similar courses, hoping for inspiration to hit.

The difference between the failing drop-out rate and the passing drop-out rate may be a stronger indication of the level of discouragement over failing a course, if we believe that the drop-out rate of those passing the course is a sort of baseline. At the bottom right of Table 2 we see the top ten courses with the highest *difference* between the drop-out rate of those who have failed the course in either of their first two semesters and the drop-out rate of those who have passed the course. This is sort of like saying that dropping out after passing cannot be a course effect and is "normal," and, thus, whatever is above that "normal rate" must be due to the course itself.

In this case, no developmental courses, not even developmental math courses, lead in discouragement, and only one freshman seminar (FSM 035) is on the list. Three courses carry over from the high drop-out-rate-after-failing list: HUC 170, HUL 100, and SCH 210. Even after subtracting out the drop-out rate after passing, these courses remain in the top ten. The "normalizing," however, removes many of the freshmen seminars from the list. Now, CIS 100 (now BTC 100, Computer Applications and Technologies), HUM 104 (Music for Children), LIB 110 (Integrating Seminar—Liberal Arts), HUC 104 (Voice & Diction), HUA 104 (Intro to Design), and SSJ 101 (Intro to Criminal Justice) are in the top ten.

In Table 3 we go one step further in attempting to remove a "normal" or non-course-related effect: we do not count against the course students who drop out after receiving a WU. First, we split drop-outs after failing into those who failed with a WU and those who failed with some other grade. We then take the drop-out rate after failing the course, excluding those who received WU's, and subtract the rate of those who dropped after passing the course (as though that were normal).

Now, the film, sexuality and liberal arts integration courses go off the list: HUC 170, SCH 210 and LIB 110. Five others, however, HUL 100, FSM 035, HUM 104, HUA 104 and SSJ 101, stay on. Even excluding the WU grades does not take these courses off of the top ten "discouragement at failure" list. Three new courses make the "top filters" list: HUA 110 (Beginning Painting), LRC 103 (Internet Research Strategies) and SSS 102 (Social Movements).

Course	Fail & DO w/ WU
ENG 101	461
MAT 096	343
MAT 095	276
ENG 099	233
CSE 099	217
SSY 101	185
FSM 001	184
HUP 102	183
SSS 100	179
HUC 101	160

Course	Fail & DO not w/ WU
MAT 095	1,041
MAT 096	938
ENG 101	885
ENG 099	596
CSE 099	362
HUP 102	321
SSY 101	312
SSS 100	273
ENG 102	221
HUC 101	198

Course	If WU Drop Out Rate
HUC 170	100%
ENA 101	100%
HUC 270	100%
FSG 011	100%
SCB 204	100%
MAT 095T	100%
ENX 099	100%
HUL 100	91%
ESL 097	89%
SCB 201	89%

Course	If Non-WU Fail Drop Out Rate
FSM 035	80%
HUA 110	73%
LRC 103	70%
ENG 098	67%
AMM 110	67%
HUM 104	64%
HUL 100	64%
HUA 103	63%
HUC 170	63%
FSM 039	62%

Course	If Non-WU Fail DO Rate - If Pass DO
HUA 110	51%
FSM 035	51%
HUM 104	50%
LRC 103	47%
AMM 110	47%
HUL 100	45%
HUA 104	43%
SSJ 101	42%
SSS 102	42%
HUC 104	41%

Table 3

Conclusion

In terms of numbers of students, after failing a developmental course or an introductory English, Humanities or Social Science course, whether or not we include WU's, large numbers of students do not return. Perhaps more interesting are the types of courses not on the lists: Business, Natural Science and Health Science.

Students in introductory Humanities and Social Sciences courses may be testing themselves. When they fail, they do not return, at least not immediately. Do these courses need an additional safety net?

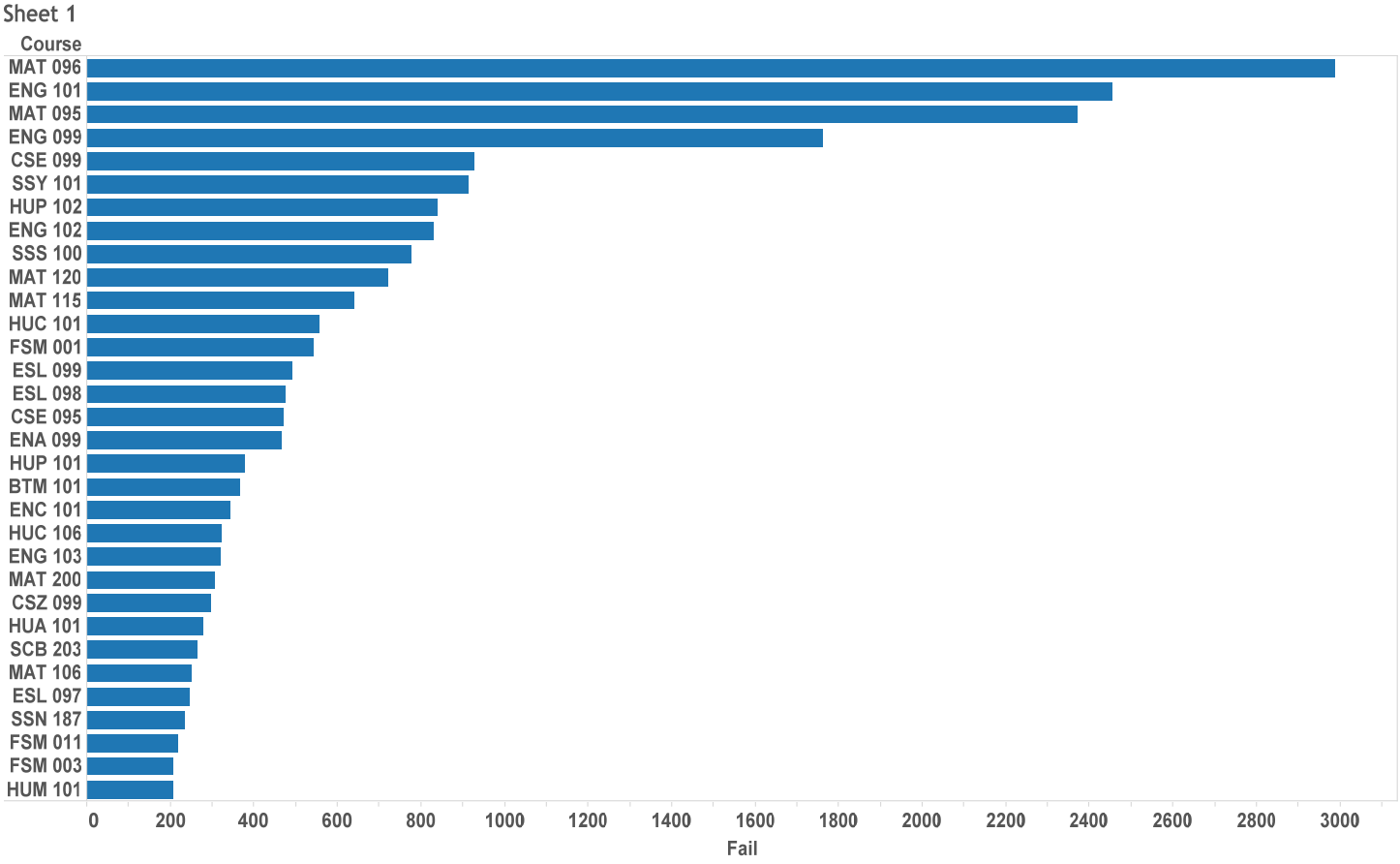
(All data for all courses with more than 100 in enrollments over the six years are shown in alphabetical order in Table 4 following. A number of graphs, showing various relationships, are also included in the following pages.)

Course	Six Year Enrollment	Did Not Return Next Fall	Pass	Pass & Not Return Next Fall	If Pass, Drop Out Rate	Fail	Fail & Not Return Next Fall	If Fail, Drop Out Rate	If Fail DO - if Pass DO Rate	Failed with WU	Failed with WU then Dropped Out	If WU Drop Out Rate	Failed Not with WU	Failed Not with WU then Dropped Out	If Non-WU Fail Drop Out Rate	If Non-WU Fail DO Rate - If Pass DO
AMA 111	575	129	456	77	17%	119	52	44%	27%	42	25	60%	77	27	35%	18%
AMA 112	118	16	108	12	11%	10	4	40%	29%	4	3	75%	6	1	17%	6%
AMM 101	963	261	793	155	20%	170	106	62%	43%	61	47	77%	109	59	54%	35%
AMM 103	135	15	125	12	10%	10	3	30%	20%	3	1	33%	7	2	29%	19%
AMM 110	307	73	275	54	20%	32	19	59%	40%	11	5	45%	21	14	67%	47%
BTA 111	1,043	225	847	124	15%	196	101	52%	37%	50	32	64%	146	69	47%	33%
BTA 112	310	32	283	23	8%	27	9	33%	25%	9	5	56%	18	4	22%	14%
BTC 100	356	88	319	69	22%	37	19	51%	30%	13	6	46%	24	13	54%	33%
BTC 200	179	28	160	22	14%	19	6	32%	18%	10	4	40%	9	2	22%	8%
BTM 101	1,857	519	1,489	299	20%	368	220	60%	40%	97	76	78%	271	144	53%	33%
BTM 103	317	57	279	37	13%	38	20	53%	39%	11	9	82%	27	11	41%	27%
BTM 104	137	18	120	13	11%	17	5	29%	19%	7	2	29%	10	3	30%	19%
BTM 110	457	77	404	48	12%	53	29	55%	43%	15	10	67%	38	19	50%	38%
CEP 121	1,291	224	1,123	145	13%	168	79	47%	34%	55	33	60%	113	46	41%	28%
CIS 100	483	93	442	66	15%	41	27	66%	51%	19	15	79%	22	12	55%	40%
CSE 095	2,496	937	2,025	642	32%	471	295	63%	31%	141	118	84%	330	177	54%	22%
CSE 099	4,289	1,417	3,361	838	25%	928	579	62%	37%	277	217	78%	651	362	56%	31%
CSE 105	586	186	534	155	29%	52	31	60%	31%	16	13	81%	36	18	50%	21%
CSE 120	504	169	383	94	25%	121	75	62%	37%	27	22	81%	94	53	56%	32%
CSZ 099	802	140	505	62	12%	297	78	26%	14%	32	18	56%	265	60	23%	10%
ELL 101	912	236	711	129	18%	201	107	53%	35%	59	39	66%	142	68	48%	30%
ELS 101	165	43	133	25	19%	32	18	56%	37%	15	10	67%	17	8	47%	28%
ENA 099	1,135	483	670	230	34%	465	253	54%	20%	74	66	89%	391	187	48%	13%
ENA 101	112	43	83	23	28%	29	20	69%	41%	8	8	100%	21	12	57%	29%
ENC 101	1,005	403	660	182	28%	345	221	64%	36%	93	78	84%	252	143	57%	29%
ENG 098	254	106	195	66	34%	59	40	68%	34%	17	12	71%	42	28	67%	33%
ENG 099	4,480	1,518	2,717	689	25%	1763	829	47%	22%	303	233	77%	1,460	596	41%	15%
ENG 101	10,207	3,230	7,750	1,884	24%	2457	1346	55%	30%	625	461	74%	1,832	885	48%	24%
ENG 102	5,013	1,067	4,184	706	17%	829	361	44%	27%	246	140	57%	583	221	38%	21%
ENG 103	1,422	341	1,102	179	16%	320	162	51%	34%	67	45	67%	253	117	46%	30%
ENG 110	183	51	119	21	18%	64	30	47%	29%	13	9	69%	51	21	41%	24%
ENX 099	135	27	90	14	16%	45	13	29%	13%		0	100%	45	13	29%	13%
ENZ 099	615	116	456	84	18%	159	32	20%	2%	24	7	29%	135	25	19%	0%
ESA 099	290	42	204	22	11%	86	20	23%	12%	5	2	40%	81	18	22%	11%
ESL 097	991	356	746	221	30%	245	135	55%	25%	19	17	89%	226	118	52%	23%
ESL 098	1,605	411	1,129	232	21%	476	179	38%	17%	34	24	71%	442	155	35%	15%
ESL 099	1,568	304	1,075	151	14%	493	153	31%	17%	31	21	68%	462	132	29%	15%
ESR 098	286	74	238	48	20%	48	26	54%	34%	9	8	89%	39	18	46%	26%
ESR 099	271	55	203	34	17%	68	21	31%	14%	8	5	63%	60	16	27%	10%
FSE 001	951	358	820	270	33%	131	88	67%	34%	58	47	81%	73	41	56%	23%
FSG 011	111	24	93	15	16%	18	9	50%	34%	2	2	100%	16	7	44%	28%
FSM 001	3,182	1,143	2,640	781	30%	542	362	67%	37%	249	184	74%	293	178	61%	31%
FSM 003	1,077	347	869	227	26%	208	120	58%	32%	94	57	61%	114	63	55%	29%
FSM 011	1,195	366	977	238	24%	218	128	59%	34%	74	51	69%	144	77	53%	29%
FSM 012	321	98	281	71	25%	40	27	68%	42%	16	13	81%	24	14	58%	33%
FSM 035	125	43	111	32	29%	14	11	79%	50%	9	7	78%	5	4	80%	51%
FSM 037	921	280	735	176	24%	186	104	56%	32%	82	51	62%	104	53	51%	27%
FSM 039	602	231	484	150	31%	118	81	69%	38%	49	38	78%	69	43	62%	31%
FSM 040	270	109	230	79	34%	40	30	75%	41%	22	19	86%	18	11	61%	27%
FSM 047	785	267	650	187	29%	135	80	59%	30%	59	39	66%	76	41	54%	25%
FSM 098	657	205	594	169	28%	63	36	57%	29%	16	12	75%	47	24	51%	23%
HSC 101	221	58	173	31	18%	48	27	56%	38%	12	8	67%	36	19	53%	35%
HSC 102	111	17	98	11	11%	13	6	46%	35%	2	1	50%	11	5	45%	34%
HUA 101	1,159	346	880	192	22%	279	154	55%	33%	98	66	67%	181	88	49%	27%
HUA 103	862	270	713	176	25%	149	94	63%	38%	66	42	64%	83	52	63%	38%
HUA 104	487	138	396	78	20%	91	60	66%	46%	38	27	71%	53	33	62%	43%
HUA 110	471	135	401	88	22%	70	47	67%	45%	40	25	63%	30	22	73%	51%
HUA 120	257	83	208	52	25%	49	31	63%	38%	28	20	71%	21	11	52%	27%

Course	Six Year Enrollment	DO	Pass	Pass & Not Return Next Fall	If Pass, Drop Out Rate	Fail	Fail & Not Return Next Fall	If Fail, Drop Out Rate	If Fail DO - if Pass DO Rate	WU	Failed with WU then Dropped Out	If WU Drop Out Rate	Failed Not with WU	Failed Not with WU then Dropped Out	If Non-WU Fail Drop Out Rate	If Non-WU Fail DO Rate - If Pass DO
HUA 125	181	45	156	33	21%	25	12	48%	27%	7	4	57%	18	8	44%	23%
HUA 130	328	105	235	52	22%	93	53	57%	35%	36	26	72%	57	27	47%	25%
HUC 101	2,908	903	2,351	545	23%	557	358	64%	41%	195	160	82%	362	198	55%	32%
HUC 104	166	35	145	22	15%	21	13	62%	47%	5	4	80%	16	9	56%	41%
HUC 106	1,714	507	1,393	301	22%	321	206	64%	43%	112	81	72%	209	125	60%	38%
HUC 108	399	108	298	56	19%	101	52	51%	33%	39	26	67%	62	26	42%	23%
HUC 120	118	29	99	20	20%	19	9	47%	27%	7	4	57%	12	5	42%	21%
HUC 170	225	69	204	51	25%	21	18	86%	61%	13	13	100%	8	5	63%	38%
HUC 190	231	72	193	52	27%	38	20	53%	26%	20	11	55%	18	9	50%	23%
HUC 270	112	38	99	29	29%	13	9	69%	40%	5	5	100%	8	4	50%	21%
HUL 100	716	158	680	132	19%	36	26	72%	53%	11	10	91%	25	16	64%	45%
HUM 101	941	263	734	149	20%	207	114	55%	35%	51	35	69%	156	79	51%	30%
HUM 104	223	48	189	27	14%	34	21	62%	47%	6	3	50%	28	18	64%	50%
HUM 146	107	40	86	30	35%	21	10	48%	13%	9	4	44%	12	6	50%	15%
HUP 101	1,383	394	1,003	205	20%	380	189	50%	29%	84	63	75%	296	126	43%	22%
HUP 102	3,065	1,104	2,224	600	27%	841	504	60%	33%	227	183	81%	614	321	52%	25%
HUP 104	341	90	264	51	19%	77	39	51%	31%	16	9	56%	61	30	49%	30%
HUP 105	124	34	87	17	20%	37	17	46%	26%	8	4	50%	29	13	45%	25%
LIB 110	1,072	287	927	189	20%	145	98	68%	47%	59	47	80%	86	51	59%	39%
LRC 103	187	57	153	34	22%	34	23	68%	45%	11	7	64%	23	16	70%	47%
MAT 095	5,531	2,217	3,160	900	28%	2371	1317	56%	27%	350	276	79%	2,021	1,041	52%	23%
MAT 095T	216	91	136	47	35%	80	44	55%	20%	6	6	100%	74	38	51%	17%
MAT 096	6,406	2,003	3,418	722	21%	2988	1281	43%	22%	501	343	68%	2,487	938	38%	17%
MAT 096T	125	50	70	20	29%	55	30	55%	26%	9	7	78%	46	23	50%	21%
MAT 106	1,168	336	918	211	23%	250	125	50%	27%	60	48	80%	190	77	41%	18%
MAT 107	195	51	149	29	19%	46	22	48%	28%	10	7	70%	36	15	42%	22%
MAT 115	2,073	503	1,434	252	18%	639	251	39%	22%	90	56	62%	549	195	36%	18%
MAT 120	2,618	567	1,896	293	15%	722	274	38%	22%	126	77	61%	596	197	33%	18%
MAT 200	1,114	243	807	128	16%	307	115	37%	22%	52	30	58%	255	85	33%	17%
MAT 201	364	54	265	35	13%	99	19	19%	6%	6	4	67%	93	15	16%	3%
MAT 241	132	34	82	18	22%	50	16	32%	10%	13	5	38%	37	11	30%	8%
SCB 201	319	84	228	46	20%	91	38	42%	22%	19	17	89%	72	21	29%	9%
SCB 203	663	154	397	64	16%	266	90	34%	18%	26	16	62%	240	74	31%	15%
SCB 204	118	12	105	7	7%	13	5	38%	32%	3	3	100%	10	2	20%	13%
SCC 201	244	46	179	27	15%	65	19	29%	14%	7	3	43%	58	16	28%	13%
SCC 210	621	105	517	69	13%	104	36	35%	21%	29	19	66%	75	17	23%	9%
SCH 210	121	30	108	21	19%	13	9	69%	50%	7	6	86%	6	3	50%	31%
SCN 195	474	124	400	81	20%	74	43	58%	38%	17	14	82%	57	29	51%	31%
SCV 101	135	29	108	18	17%	27	11	41%	24%	4	3	75%	23	8	35%	18%
SSA 101	751	172	566	88	16%	185	84	45%	30%	69	35	51%	116	49	42%	27%
SSE 103	264	52	178	22	12%	86	30	35%	23%	12	9	75%	74	21	28%	16%
SSE 104	188	32	116	15	13%	72	17	24%	11%	7	1	14%	65	16	25%	12%
SSH 101	319	53	268	32	12%	51	21	41%	29%	19	11	58%	32	10	31%	19%
SSH 102	537	117	421	62	15%	116	55	47%	33%	36	24	67%	80	31	39%	24%
SSH 103	264	84	211	53	25%	53	31	58%	33%	20	13	65%	33	18	55%	29%
SSH 104	296	79	246	51	21%	50	28	56%	35%	15	13	87%	35	15	43%	22%
SSH 106	112	34	79	16	20%	33	18	55%	34%	13	8	62%	20	10	50%	30%
SSJ 101	657	166	557	102	18%	100	64	64%	46%	26	19	73%	74	45	61%	42%
SSJ 102	195	34	166	18	11%	29	16	55%	44%	7	5	71%	22	11	50%	39%
SSN 187	1,238	330	1,002	216	22%	236	114	48%	27%	80	47	59%	156	67	43%	21%
SSP 101	325	61	263	37	14%	62	24	39%	25%	19	12	63%	43	12	28%	14%
SSS 100	3,683	1,097	2,904	645	22%	779	452	58%	36%	264	179	68%	515	273	53%	31%
SSS 102	108	28	89	16	18%	19	12	63%	45%	4	3	75%	15	9	60%	42%
SSY 101	4,948	1,442	4,034	945	23%	914	497	54%	31%	244	185	76%	670	312	47%	23%
SSY 230	183	41	156	29	19%	27	12	44%	26%	4	3	75%	23	9	39%	21%
SSY 240	991	233	859	175	20%	132	58	44%	24%	55	35	64%	77	23	30%	9%

Table 4

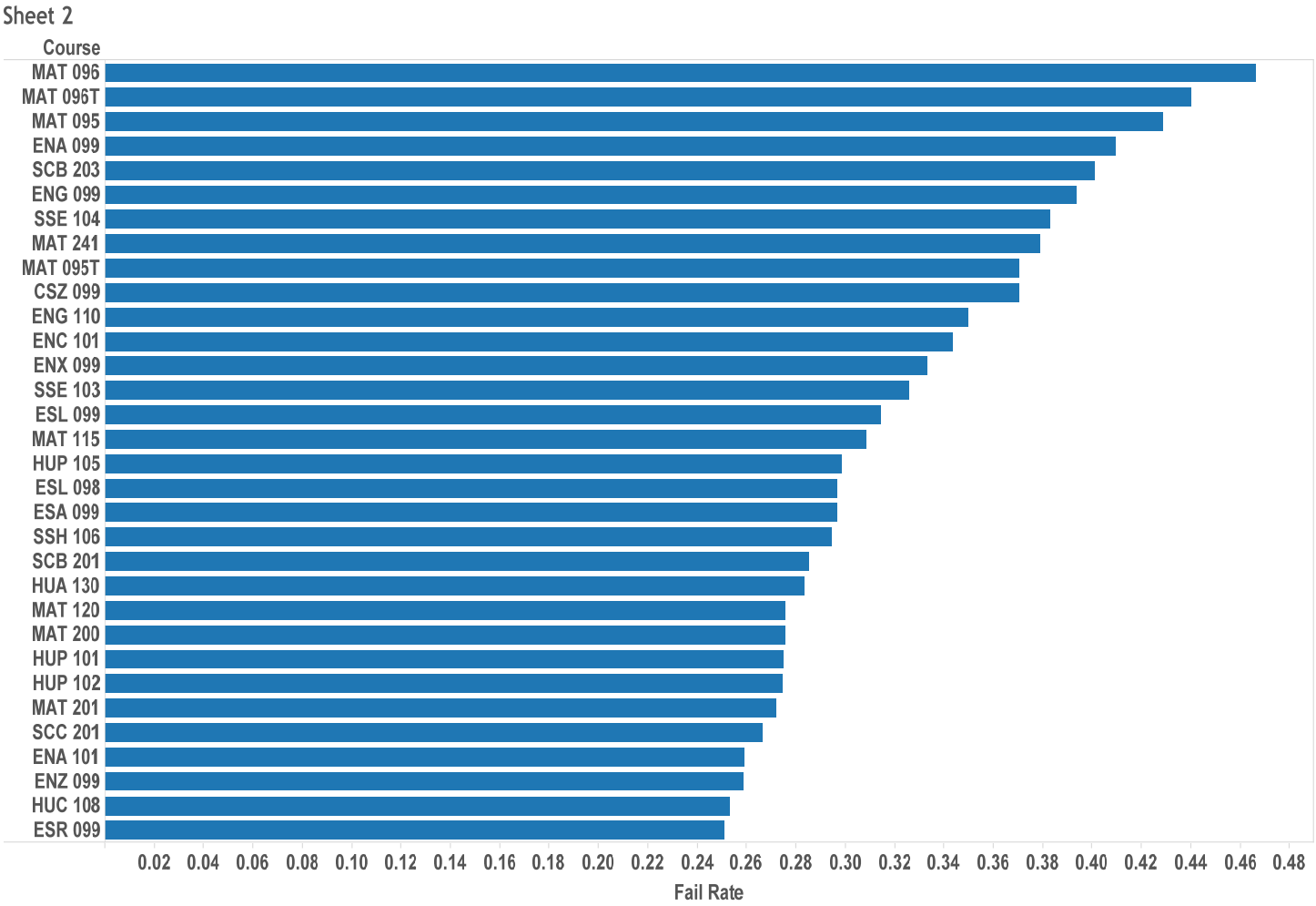
Courses with the Highest Number of Failures Over Six Years—Fa 07-Sp 13



Sum of Fail for each Course. The view is filtered on sum of Fail, which ranges from 206 to 2,988.

Figure 1

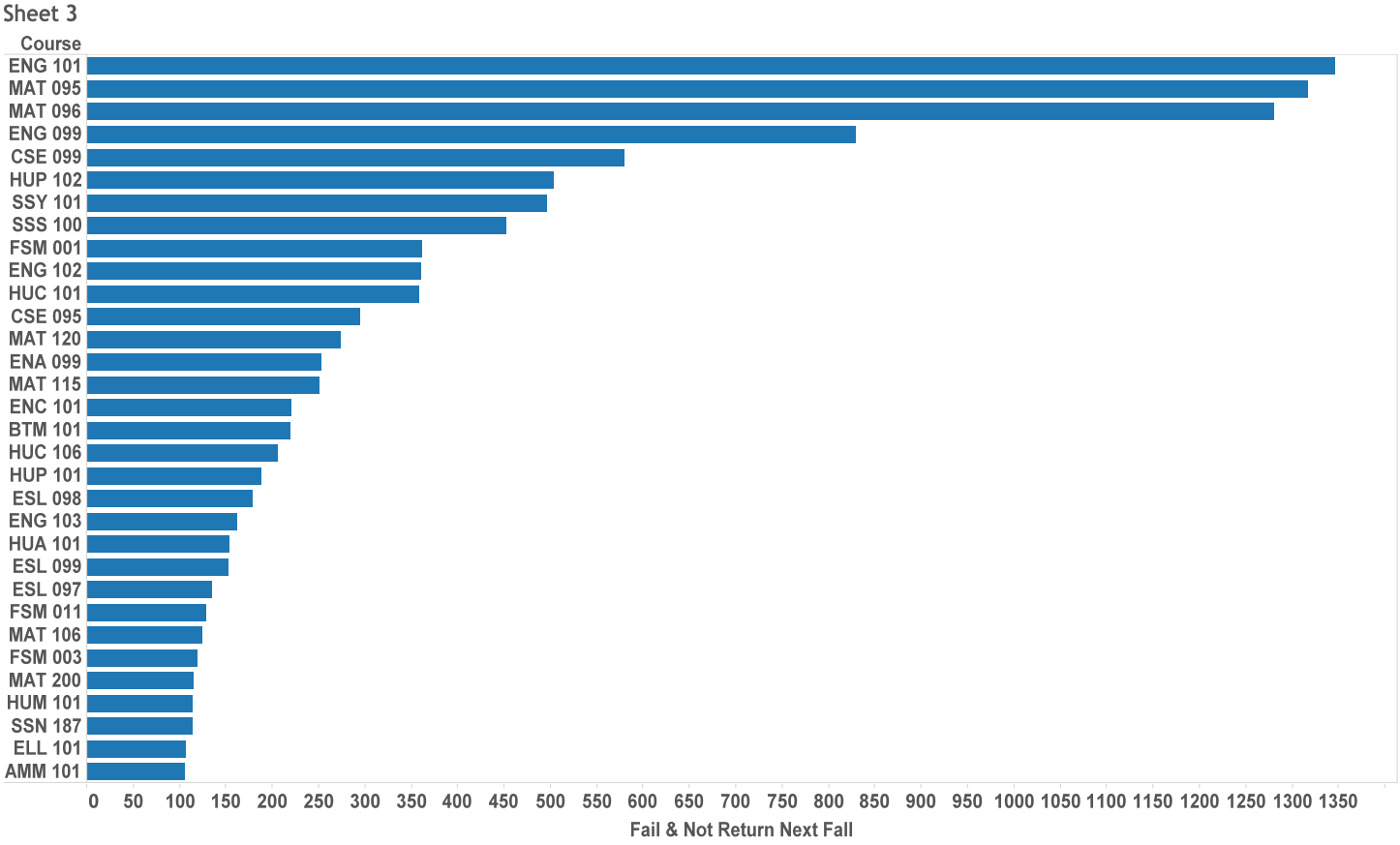
Courses with the Highest Failure *Rates* Over Six Years—Fa 07-Sp 13



Sum of Fail Rate for each Course. The view is filtered on sum of Fail Rate, which ranges from 0.2500 to 0.4664.

Figure 2

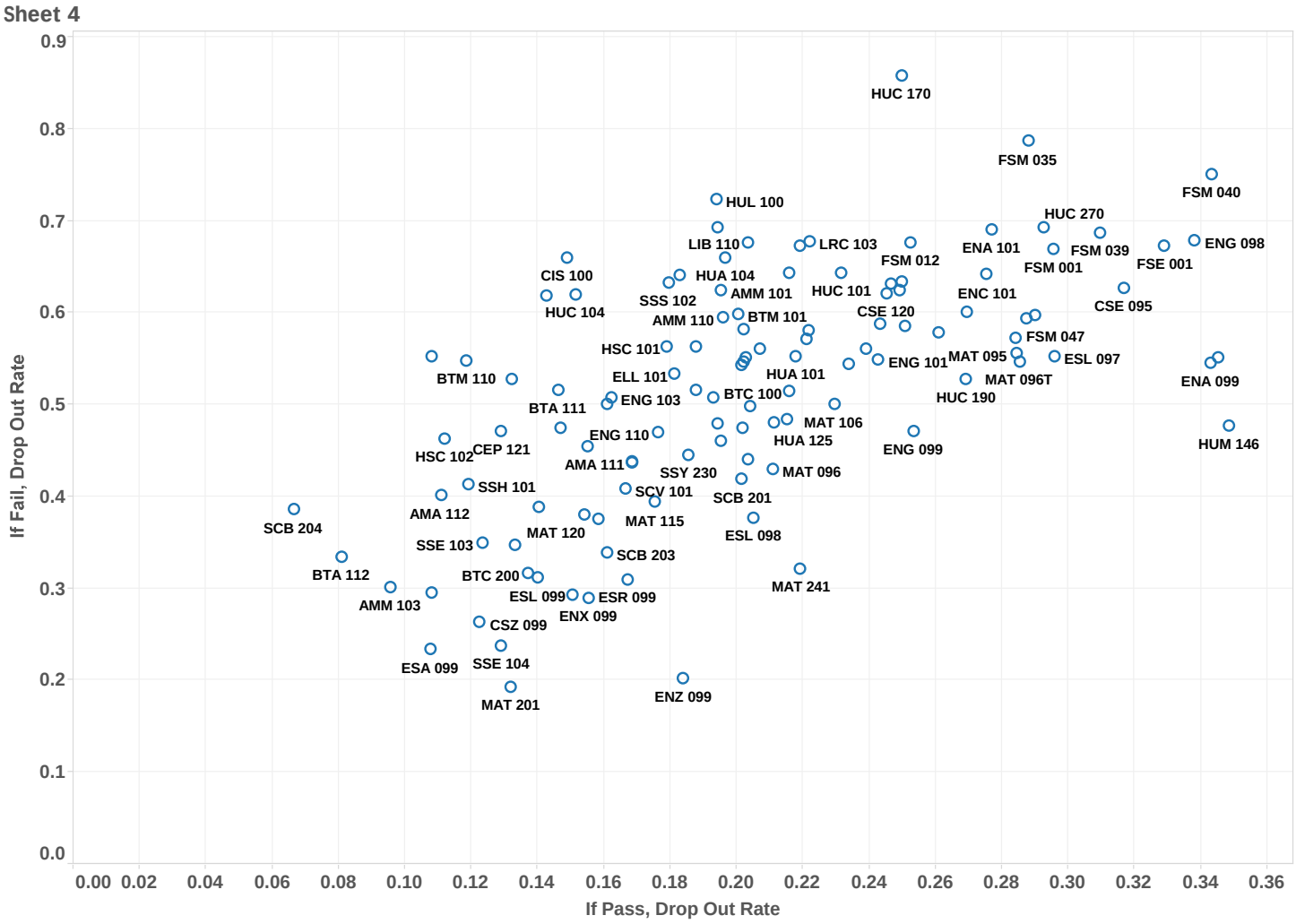
Courses with the Highest Numbers of Students Who Failed & Did Not Return the Next Fall Over Six Years—Fa 07-Sp 13



Sum of Fail & Not Return Next Fall for each Course. The view is filtered on sum of Fail & Not Return Next Fall, which ranges from 105 to 1,346.

Figure 3

Drop-out Rates: If Passed the Course vs. If Failed the Course Over Six Years—Fa 07-Sp 13

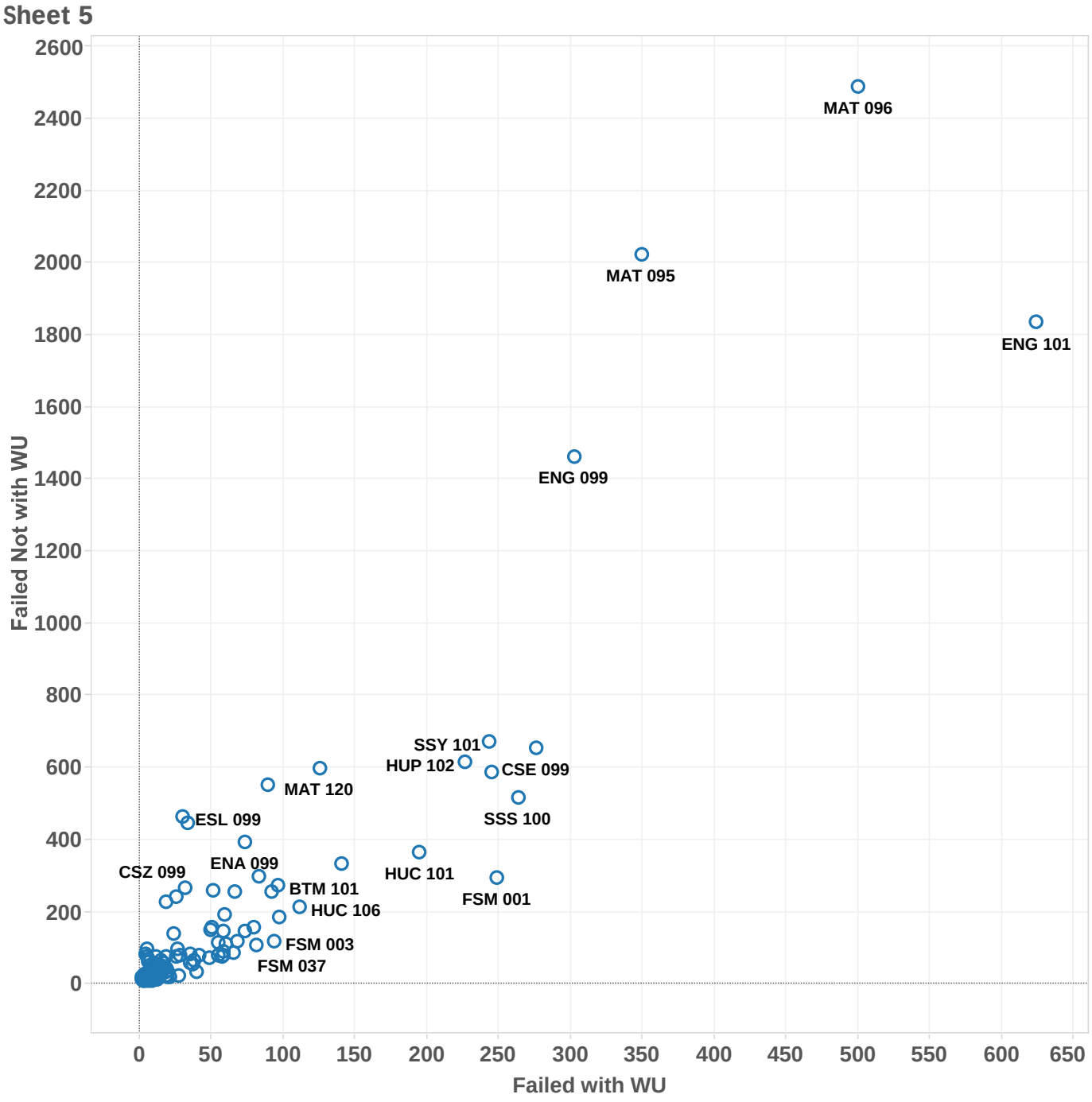


Sum of If Pass, Drop Out Rate vs. sum of If Fail, Drop Out Rate. The marks are labeled by Course. Details are shown for Course.

Figure 4

HUC 170 shows a high probability of dropping out, if a student fails the course. HUM 146 shows a high probability of dropping out, if a student passes the course. Students in ENZ 099 are almost equally likely to drop out whether they pass or fail the course.

Numbers of Students who Failed the Course: Failed with WU vs. Failed by Some Other Grade Over Six Years—Fa 07-Sp 13



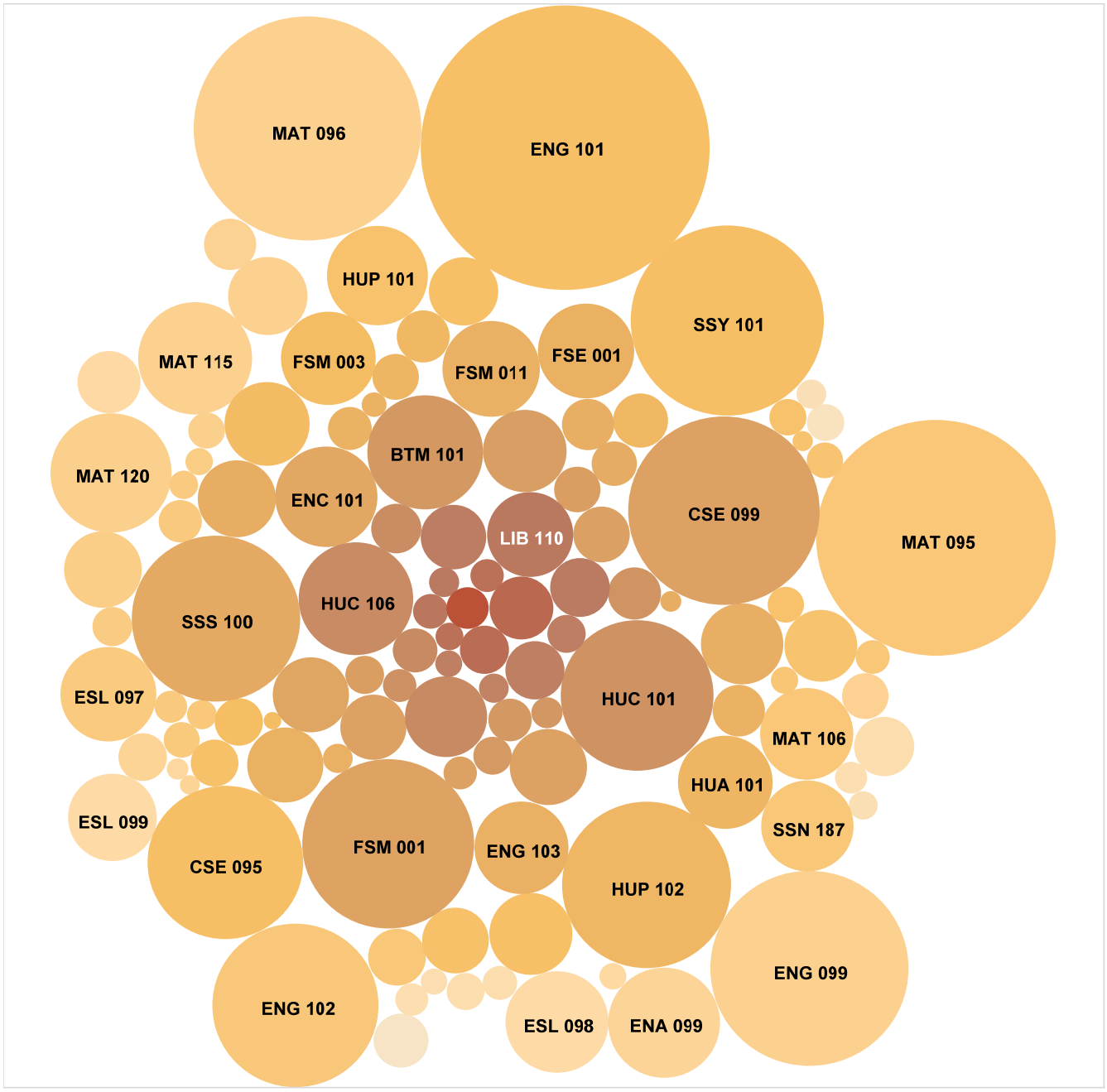
Sum of Failed with WU vs. sum of Failed Not with WU. The marks are labeled by Course. Details are shown for Course.

Figure 5

MAT 096 produced more WU failures than ENG 101, but ENG 101 produced more non-WU failures.

Number of Drop Outs (Size of Circles) vs. Degree of Filtering (darker indicates a higher net of if-fail-drop-out-rate minus if-pass-drop-out-rate)

Sheet 6



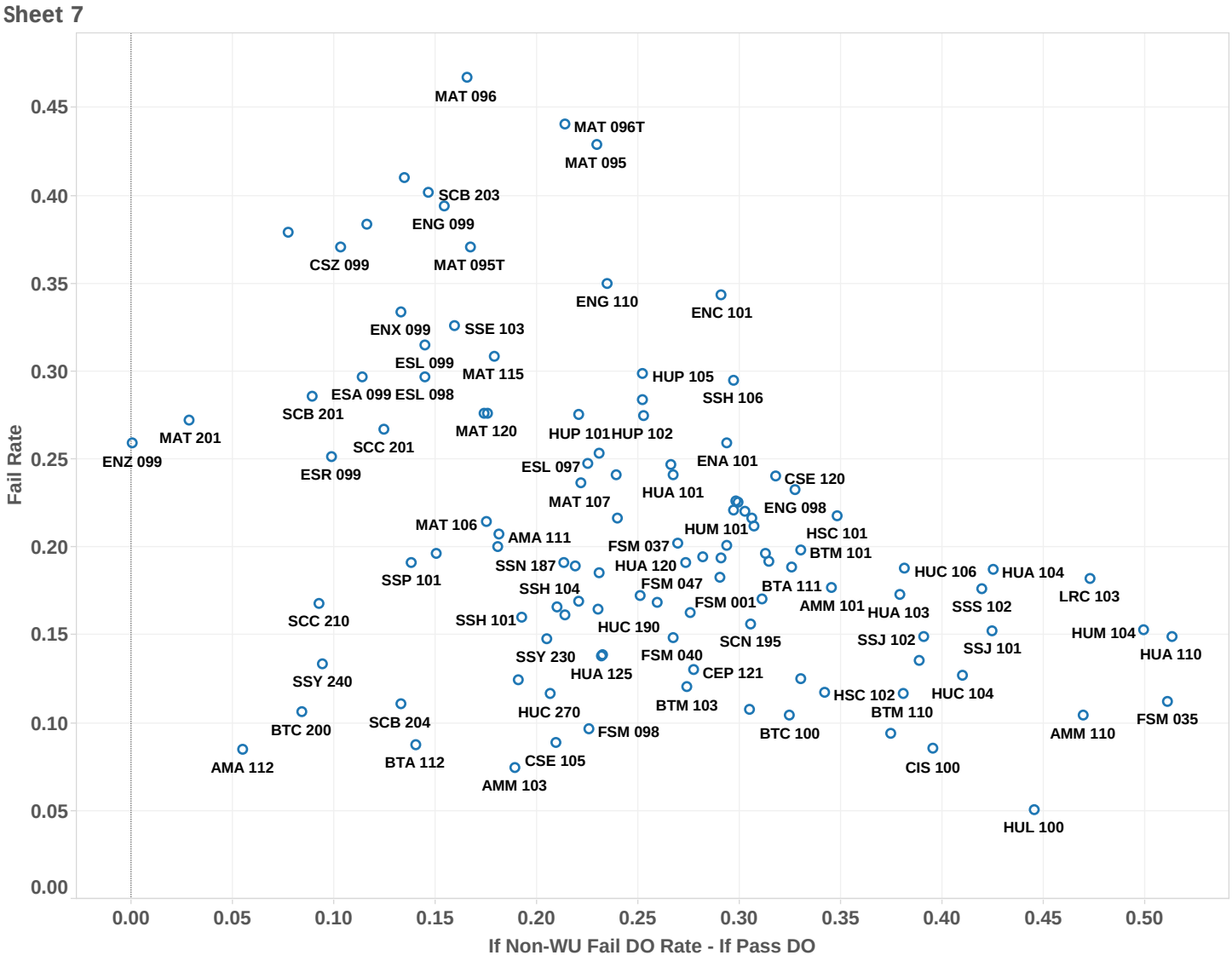
Course. Color shows sum of If Fail DO - if Pass DO Rate. Size shows sum of Did Not Return Next Fall. The marks are labeled by Course.

If Fail DO - if Pass ..

0.0170 0.6071

Figure 6

Course Failure Rate vs. Net If Failure, Drop-out Rate
(excluding WUs—if fail course drop-out rate minus if pass course drop-out rate)



Sum of If Non-WU Fail DO Rate - If Pass DO vs. sum of Fail Rate. The marks are labeled by Course. Details are shown for Course.

Figure 7

MAT 096 has the highest failure rate of all courses, but not a high level of filtering. If we only include non-WU failures and subtract out the if-pass-drop-out-rate from the if-fail-drop-out rate, then HUA 110 and FSM 035 appear to be more influential. Failing these classes appears to be strongly associated with not attending the next semester.