



# Faculty Senate Archives

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Faculty Senate

Academic year 2018-2019

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## **Attachment 6 to Faculty Senate Meeting February 25, 2019**

### **Student Early Alert System (SEAS) End-of-Term Fall 2018**

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**Additional information:** Digitized by University Libraries Technical Services and archived in SOAR: Shocker Open Access Repository at:  
<http://soar.wichita.edu/handle/10057/15785>

**QUESTION: Is SEAS being deployed successfully?**

Table 1: Student Early Alert System (SEAS) End-of-Term Fall 2018 (COURSE LEVEL Univariate)

565 class sections, 312 instructors (unique headcount) &amp; 9,087 students (unique headcount, 81.5% of census UG degree bound students)

College/Department	Section counts	% students		enrolled	at risk	% students	
		at risk	at risk			at risk	at risk
Total	565	100%	22.1%	Mean # of students per class	29.9	5.8	22.1%
Business	99	17.5%	19.8%				
Education	49	8.7%	18.0%	# Students on Census in SEAS participating class:			9,087
Engineering	63	11.2%	23.6%	% of all students on Fall census:			57.6%
Fine Arts	36	6.4%	17.3%	% all degree bound students on fall census:			65.3%
Health Professions	71	12.6%	16.6%	% undergraduate degree bound on fall census:			81.5%
LAS Humanities	86	15.2%	27.4%				
LAS Natural Sciences & Math	50	8.8%	32.9%				
LAS Social Sciences	101	17.9%	18.2%				
LAS Other	7	1.2%	67.6%				
Other College Units (Honors/IIC)	3	0.5%	11.4%				

(see SEAS College Division Participation Report for department counts)

Class Dimensions:	Section Counts	% students		Class Dimensions:	Section Counts	% students	
		at risk	at risk			at risk	at risk
<b>Course number group:</b>		100%		<b>Class Type:</b>		100%	
0 thru 99	7	1.2%	56.9%	Lecture	489	87%	22.2%
100 thru 199	158	28.0%	23.1%	Lab	25	4.4%	15.7%
200 thru 299	95	16.8%	24.2%	Experiential	16	2.8%	17.9%
300 thru 399	132	23.4%	21.1%	Activity Course	15	2.7%	20.1%
400 thru 499	72	12.7%	16.0%	Seminar	13	2.3%	28.7%
500 thru 599	31	5.5%	22.3%	Other	7	1.2%	22.3%
600 thru 699	38	6.7%	21.6%	<b>Delivery Method:</b>		100%	
700 thru 799	13	2.3%	15.1%	HYB Hybrid	52	9.2%	17.5%
800 thru 899	19	3.4%	25.3%	HYO Hybrid Online	3	0.5%	low count
900 thru 999	0	0.0%		IIE Internet Only	155	27.4%	21.5%
<b>Time of day:</b>		100%		TCI Traditional Classroom	355	62.8%	22.9%
morning	220	38.9%	21.8%	<b>General Education:</b>		100%	
afternoon	107	18.9%	20.8%	non Gen Ed	415	75.9%	22.3%
evening	72	12.7%	23.6%	Gen Ed Introduction	82	15.0%	22.5%
arranged	166	29.4%	22.7%	Gen Ed Further Study	50	9.1%	23.4%
<b>Meetings per week:</b>		100%		Gen Ed I & P	18	3.3%	12.0%
meets 1 weekday	96	25.0%	17.4%	<b>Basic skills:</b>		100%	
meets 2 weekdays	256	66.7%	20.9%	Basic Skills crs	67	11.9%	20.2%
meets 3 weekdays	23	6.0%	37.6%	Non Basic Skills crs	498	88.1%	22.3%
meets daily	9	2.3%	53.6%	<b>Instructor Type:</b>		100%	
<b>Day of class:</b>		100%		Faculty	385	68.1%	22.1%
Monday only	24	6.0%	20.1%	Lecturer	61	10.8%	16.4%
Tuesday only	24	6%	13.5%	GTA	77	13.6%	25.3%
Wednesday only	14	4%	14.9%	Unclassified	42	7.4%	24.1%
Thursday only	25	6%	18.5%				
Mon & Wed	115	29%	23.3%				
Tues & Thur	141	35%	18.9%				
Mon, Wed, Fri	19	5%	36.8%				
other	37	9%	22.1%				

**Summary:** With 81.5% of all degree bound undergraduate students in a SEAS participating class, deployment of SEAS is exceeding expectations, especially given this is a voluntary commitment by faculty. Review of the class dimensions reflect participation in nearly every level of measurement from across colleges, course levels, time and day of week, class types and methods, general education and basic skills and instructor type. A notable increase this year was an increase in GTAs who now are equivalent to lecturers in participating SEAS classes, especially important given the concentration of GTAs in lower level course offerings.

**QUESTION: Is there a relationship between SEAS risk and at-risk populations and does SEAS change behavior?**Table 2: Student Early Alert System (SEAS) End-of-Term Fall 2018 (STUDENT LEVEL Bivariate)  
(sample: unique count 9,087 students in SEAS participating classes; source: end of term data from BIPMS SS\_SEAS)**All Students in SEAS courses at end of term (includes undergraduate and graduate)**

total students	not at-risk	at-risk	% at-risk	Risk type:	of all eligible SEAS stds	of those marked at-risk	% removed from at-risk after notification
9,087	6,819	2,268	25.0%	attendance	8.5%	33.2%	30.4%
65.3% of Fall 2018 census degree bound students (UG & GR)				participation	7.6%	29.8%	33.3%
8,505	6,326	2,179	25.6%	assignments	15.0%	58.5%	25.2%
81.5% of Fall 2018 census degree bound students undergraduates				exams	17.3%	67.5%	35.5%
<b>students** who withdraw after at-risk notification:</b>				<b>num at-risk dimensions per student marked at-risk:</b>			
num withdrew from course after notification			513 (23.5% of at-risk)	num risk type cnt	100%	cuml %	
of withdrawals % within 1 week of at-risk			50.3%	1	54.2%	54%	
of withdrawals % within 2 week of at-risk			15.2%	2	22.2%	76%	
of withdrawals % within 3 week of at-risk			34.5%	3	10.9%	87%	
				4	12.8%	100%	

**Bivariate Comparison of Undergraduates degree bound in SEAS Participating Classes**

CAUTION-- differences are impacted by course selectivity bias

Dimension:	All UG	not at-risk*	at-risk1*	Dimension:	All UG	not at-risk1*	at-risk1*
unique head counts	8,505	6,326	2,179	<b>Academic performance:</b>			
	100%	74.4%	25.6%	cumulative hours	83.3	85.1a	78.8b
<b>Major type:</b>	100%	100%	100%	cumulative gpa	3.08	3.22a	<b>2.66b^</b>
Bachelor degree major	84.7%	84.8%a	84.4%a	WSU gpa	3.00	3.19a	<b>2.44b^</b>
Bachelor field major	0.9%	0.8%a	1.1%a	transfer gpa	3.28	3.35a	3.06b
Bachelor general studies	2.4%	2.3%a	2.8%a	<b>end-of term gpa</b>	2.87	3.16a	<b>2.04b^</b>
Pre Major	11.9%	12.1%a	11.6%a	% cumulative gpa <2.00	5.1%	2.7%a	<b>12.3%b^</b>
				WSU gpa <2.00	9.8%	5.0%a	<b>23.5%b^</b>
% Undecided Major	3.2%	3.0%a	3.8%a	% current probation	8.1%	4.5%a	<b>18.6%b^</b>
				% with probation history	20.8%	14.6%a	<b>38.8%b^</b>
<b>Student class:</b>	100%	100%	100%	<b>Performance scores (means):</b>			
freshmen	15.4%	14.4%a	<b>18.3%b^</b>	ACT( incl SAT)	23.1	23.4a	22.1b
sophomore	18.4%	19.0%a	<b>16.5%b^</b>	incoming academic ability**	41.7	45.2a	31.2b
junior	23.5%	23.2%a	24.4%a	probability on probation 1st year	17.6%	18.0a	16.5a
senior	42.7%	43.3%a	40.9%b	High School gpa or application gpa	3.40	3.45a	3.27b
new student	29.9%	30.4%a	28.4%a	High School percentile	67.6	69.4a	62.2b
				remedial need	35.4%	33.6%a	40.7%b
<b>Demographics:</b>				<b>SSC Degree Completion &amp; Risk:</b>			
age in years (mean)	22.7	22.6a	23.0b	SSC graduation probability	52.7%	55.4%a	44.7%b
% female	52.8%	54.0%a	49.2%b				
% under-represented minority**	20.0%	18.6%a	23.9%b	Degree completion low risk	35.0%	38.5%a	<b>24.7%b^</b>
<b>Residency:</b>	100%	100%	100%	Degree completion moderate risk	37.2%	37.7%a	35.9%a
resident	82%	82.7%a	81.0%a	Degree completion high risk	27.8%	23.8%a	<b>39.4%b^</b>
non-resident	11.0%	11.4%a	10.0%a				
international	6.7%	5.9%a	9.0%b				
% first generation	44.9%	44.1%a	47.1%b				
% family income <= 125% of poverty	15.7%	14.3%a	19.6%b				
% on financial aid	79.3%	81.1%a	73.9%b				
% in university housing	13.2%	13.6%a	12.0%a				

\* Values in the same row not sharing the same subscript (a or b) are significantly different at p< .05 level; **bold** values with ^ are meaningfully significant at moderate or higher level.

\*\* **under-represented minority** includes American Indian/Alaskan Native, Black non-Hispanic, Hawaiian & Hispanic; **incoming academic ability** is a standardized composite of HS gpa, HS percentile and ACT/SAT (0-100 lower scores the greater likelihood of academic failure); **low income** is defined as total family income (2017 dollars, cpi) at or below 125% of the poverty threshold based on family size.

**Summary:** While there are few statistically significant differences between at-risk and non-risk students among academic profiles and demographic measures, there are several academic performance measures where at-risk students are performing below non-risk students. These findings support the assumption that SEAS risk behavior dimensions (attendance, participation, assignments, exams/quizzes) are correlated with behavior that increases the odds of being academically at-risk. The data also supports the belief that informing students of their behavior risk during the semester can cause students to modify their behavior to reduce risk.

**QUESTION: Does SEAS behavioral risk activity have an independent impact on performance outcomes net of controls?**

Table 3: Student Early Alert System (SEAS) End-of-Term Fall 2018 (Multi-variate Analysis)

**Course-level analysis** (OLS regression) regressing predictors on course grade gpa outcome (dependent variable = course grade gpa 0 - 4) among undergraduate degree seeking SEAS students.

Predictors (predicting end of term class gpa)	unstd beta	std beta	sig.	share of unique
<b>SEAS Risk dimensions:</b>				
attendance risk (0,1)	-0.233	-0.076	0.000	4.0%
<b>Demographics:</b>				
age in years	n/a (student earned hours is proxy)			
female (0,1)	0.114	0.043	0.013	1.2%
under-represented minority* (0,1)	not significant			
first generation (0,1)	not significant			
low income <= 125% of poverty (0,1)	-0.132	-0.038	0.023	1.0%
international (0,1)	not significant			
university housing (0,1)	0.229	0.053	0.003	1.7%
<b>Academic status:</b>				
enrolled full-time (0,1)	not significant			
cumulative earned hours (student class proxy)	0.006	0.209	0.000	21.1%
student is college division major (0,1)	0.173	0.062	0.000	2.3%
undecided major (0,1)	not significant			
<b>Performance &amp; entering academic ability:</b>				
history of probation	-0.936	-0.349	0.000	68.7%
incoming academic ability composite*	not significant			
	Rsqr	0.243	0.000	

**Summary:** The above OLS regression shows that class attendance issues have a negative independent impact on end-of-term gpa net of controls. These findings lend support to the argument that SEAS dimensions not only correlate with negative academic performance but that SEAS dimensions can have an important negative consequences on performance outcomes.

**Student-level analysis** (logistic regression) regressing predictors on SEAS risk indicator (dependent variable = SEAS risk 0,1 where 1=risk) among undergraduate degree seeking SEAS students.

Predictors (predicting at-risk student)	beta	sig.	odds of risk	% of risk
<b>Demographics:</b>				
age in years	n/a (student earned hours is proxy)			
female (0,1)	not significant			
under-represented minority* (0,1)	not significant			
first generation (0,1)	not significant			
low income <= 125% of poverty (0,1)	0.206	0.005	1.229	23% more likely
international (0,1)	not significant			
university housing (0,1)	not significant			
<b>Academic status:</b>				
enrolled full-time (0,1)	-0.297	0.000	0.743	26% less likely
cumulative earned hours (student class proxy)	not significant			
undecided major (0,1)	not significant			
<b>Performance &amp; entering academic ability:</b>				
history of probation	0.258	0.001	1.294	30% more likely
incoming academic ability composite*	-0.035	0.033	0.966	3% less likely per increase

\* Under-represented minority includes Black non-Hispanic, Hispanic, American Indian, Alaskan Native & Hawaiian; incoming academic ability is a standardized composite of application gpa and high school percentile (ACT/SAT has no significance).