Advancing Student Success in Partnership with Complete College America

"Game Changers"

Full-Time is 15

Pathways to Success
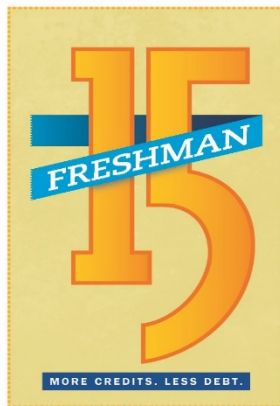
Math Pathways

Full-Time is 15

SAVE $ ON TUITION

FRESHMAN 15

Enroll in **15+** credits

Pay for **12** credits

Graduate on time.

MORE CREDITS. LESS DEBT.

Don't take on extra debt.

Start as a freshman to maximize your savings and get a head start on your career. But it's not just for freshmen. **Any** MSU undergraduate can receive the Freshman 15 advantage.

M MONTANA STATE UNIVERSITY

- Students fill their plates
- Accelerate degree completion
- Save on tuition
- Reduce exposure to debt

Game Changing:
Three-quarters (vs. half) of first-year students are now taking 15 or more credits

Pathways to Success

Table 1: The centroid student computed for the *Mechanical Engineering* major at Montana State University.

Fall-Y1	Spring-Y1	Fall-Y2	Spring-Y2	Fall-Y3	Spring-Y3	Fall-Y4	Spring-Y4
ANTY-101	CHMY-141	EGEN-201	EELE-250	EGEN-335	EMEC-321	EMEC-405	EGEN-488
CLS-101	EGEN-117	EMAT-251	EGEN-202	EGEN-350	EMEC-326	EMEC-425	EMAT-350
EMEC-100	EGEN-118	EMAT-252	EGEN-205	EMEC-303	EMEC-342	EMEC-445	EMEC-402
M-171	M-172	M-273	ETME-215	EMEC-320	EMEC-360	EMEC-489R	EMEC-403
PHSX-103	PHSX-220	ME-102	ETME-217	EMEC-341	EMEC-443	MUSI-203	EMEC-499
	WRIT-101	PHSX-222	M-274				FCS-101

Engineering & Physical Science "Meta-Major"
First-Year Matryoshka

- *CORE: Seminar, WRIT, Mathematics, Natural Science, Humanities*
- *STEM Foundations: CHMY, PHSX-2*
- *Engineering Foundations: EGEN-2*
- *Introduction to Discipline: EMEC*

Pathways to Success

"Technology Enhanced Advising"

Degree Works for four-year templates
and plans – starting at Orientation.

Cat Course Scheduler
"Schedulocity" for term schedules

Early Alert *with*
Champ Change Engagement

Math Pathways

- *Continuous Improvements in Placement*

- *Co-requisite Pathways – Innovation over Remediation*

- *Intake Pathways – CoEX, ...*

- *Help Centers and Tutoring*

- *Student Success Coordinators*

- *Pedagogical Redesign in Flipped Classroom Instruction*

Pass rates rose from 60% to 80% in M121, STAT216

Conclusions

- 15-credit registration increased significantly

- Success in mathematics dramatically improved

- 4-year and 5-year graduation rates jumped nearly 10 percentage points over the past five years

- Students save time & money, and graduate on schedule

- Partnership with CCA accelerates implementation and advances the foundational scholarship

References

APLU Project Degree Completion 2016 C. Fastnow and D. Singel

"Finding Pathways to Student Success from Data"
B. Mumey, S. Yaw, C. Fastnow, D. Singel

"Partnerships and collaborations: The foundation for technology enhanced active learning (TEAL) classrooms", *Lockhart, M., and Jackson, L. (2015).*

Innovation In Educational Technology Award Northwest Academic Computing Consortium

CSEDU 2015
7th INTERNATIONAL CONFERENCE ON COMPUTER SUPPORTED EDUCATION

MONTANA STATE UNIVERSITY 125 YEARS

Aligning UM Student Success Efforts with Complete College America's Game Changers

Structured Schedules

Guided Pathways to Success

Co-Requisite Support

Math Pathways

Core Course Registration

- 76% of incoming first-year students are pre-registered for structured schedules

- Math pathways are taken into account with all core courses

- Each structured schedule consists of at least 15 credits, including Freshman Seminar

Exploratory Studies Program

- Seven exploratory tracks based on meta-majors provide undecided students with a more focused approach to the major discovery process

- Major maps provide three-semester pathways of guided coursework and major discovery checkpoints
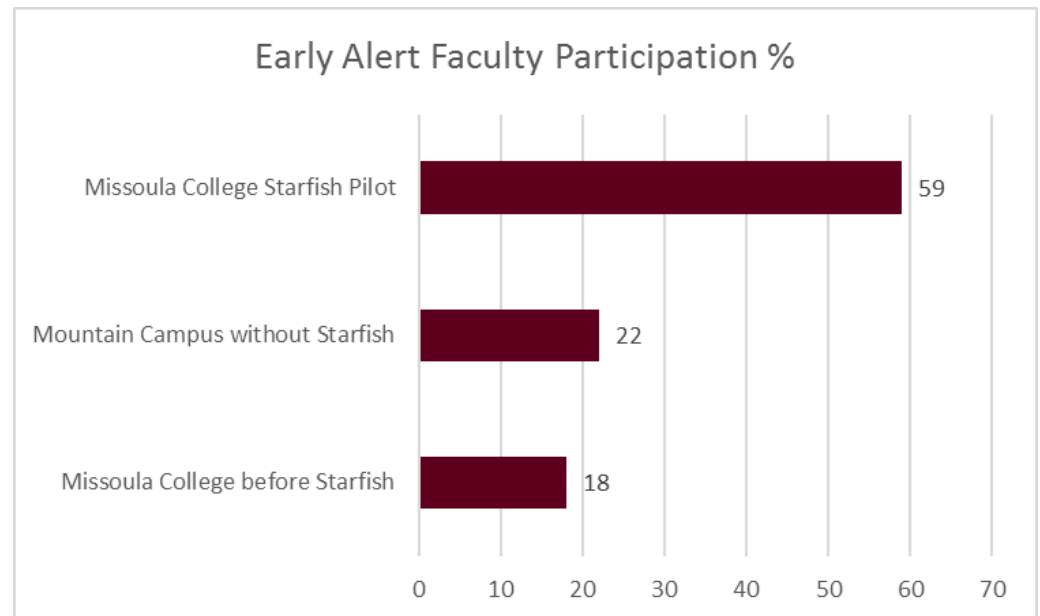
Co-Requisite Support

- Current pilots in gateway math and writing courses

- Small class sizes and embedded academic support

- Next steps:

  1. Scale co-requisite offerings

  2. Integrate co-requisite sections into major core courses and exploratory tracks

Starfish Student Success Platform

Early Alert: Intrusive advising interventions ensure students have the support necessary to stay on-track.

- Over 12,000 tracking items have been raised so far during fall 2017 semester, including over 8,000 "kudos"

Early Alert Faculty Participation %

Category	Value
Missoula College Starfish Pilot	59
Mountain Campus without Starfish	22
Missoula College before Starfish	18

(Axis: 0 10 20 30 40 50 60 70)

Math Pathways and EdReady

- Established math pathways for quantitative literacy, statistics, and STEM-track majors.

- Over 80% of students who complete EdReady improve their math placement level

- Over 400 students have utilized EdReady so far during AY 17/18

4 to the GRADUATION DOOR. ©

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