

**Priority for Development and Growth**

<b>Ranking Category:</b>	Priority for Development and Growth:	13
	Consider for Development and/or Modification:	3
	Priority for Substantial Modification:	0
<b>Total Count:</b>		<b>16</b>

Average: **7.350**

Range: **1.900**

Reviewer	Alignment		Demand		Productivity		Quality		Efficiency		Opportunity		Total
	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight	
Reviewer: 2	6	1.2	8	1.2	6	1.2	7	1.4	5	0.5	7	1.05	<b>6.55</b>
Reviewer: 1	7	1.4	8	1.2	7	1.4	7	1.4	6	0.6	7	1.05	<b>7.05</b>
Reviewer: 3	9	1.8	8	1.2	8	1.6	9	1.8	7	0.7	9	1.35	<b>8.45</b>

**1. ALIGNMENT**

**Reviewer: 1** **Score:**  **Weighted Score:**

**Strengths:** UM 2020 alignment was well justified in Diversity efforts and in Leadership and Engagement. The new Data Analytics course shows strategic alignment to UM 2020. The broad interdisciplinary course loads, and Gen-Ed requirements makes the courses critical.

**Weaknesses:** Efforts toward other areas of UM 2020, Partnering for student success and sustainability, lacked depth or reasoning that justified alignment.

**Reviewer: 2** **Score:**  **Weighted Score:**

**Strengths:** Data sciences and data analytics are areas of high growth, and the Mathematics program has responded to that growth.

**Weaknesses:** Many of the Gen-Ed courses are taught by lecturers.

**Reviewer: 3** **Score:**  **Weighted Score:**

**Strengths:** B1-Students are involved with tutoring in the Math Tutor Lab.  
 B1-Nearly half of graduating students are female in a male dominated field.  
 B1-Tribal college program to help Native Americans transition to UM.  
 B1-Sustainability program integrated into learning objectives.  
 B2-Nearly all (if not all) majors at UM require math.

**Weaknesses:** None found.

**2. Demand**

**Reviewer: 1** **Score:**  **Weighted Score:**

**Strengths:** The demand for this program based on their SCH is substantial. They are further justified by their interdisciplinary courses and gen-ed involvement.

**Weaknesses:** Very few weaknesses.

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<b>Reviewer: 2</b>	<b>Score:</b> 8	<b>Weighted Score:</b> 1.2
<b>Strengths:</b>	The Mathematics program produces a very large amount of Gen-Ed SCH. These courses are a benefit to students in all majors.	
<b>Weaknesses:</b>	As the program notes, the centralized data is for the entire department, not just the Mathematics program. Little information is given as to how the program differs from the department. Would the quintiles (for the quantitative data) be different if the PROGRAM were measured, instead of the department?	
<b>Reviewer: 3</b>	<b>Score:</b> 8	<b>Weighted Score:</b> 1.2
<b>Strengths:</b>	B1-Interdisciplinary computer science program. B1-Works closely with education field to better prepare future Montana teachers. B1-Free math tutoring for 100 level math. B2-General education requirement for most (if not all) majors on campus.	
<b>Weaknesses:</b>	B1-Free math tutoring not offered for 200 level.	

**3. Productivity**

<b>Reviewer: 1</b>	<b>Score:</b> 7	<b>Weighted Score:</b> 1.4
<b>Strengths:</b>	With declining enrollment the relatively stable numbers of majors is a good sign. Their SCH numbers are also substantial and above average.	
<b>Weaknesses:</b>	There number of degrees awarded is low, and has high fluctuation.	
<b>Reviewer: 2</b>	<b>Score:</b> 6	<b>Weighted Score:</b> 1.2
<b>Strengths:</b>	The Math Learning Center is a great help for students.  The bulk of the SCH in this program seem to come from Gen-Ed courses, so this department is helping students all across campus.	
<b>Weaknesses:</b>	Earlier in this report, the program stated "that our lecturers are an integral and essential part of delivering our general education curriculum. Losing them would leave us very understaffed and would severely handicap the delivery of our general-education curriculum, affecting many students." If those four lecturers are indeed teaching the bulk of the Gen-Ed courses, then that leaves 20 T/TT faculty to serve 25.2 graduates each year. (I'm sure some Gen-Ed courses are taught by T/TT faculty, but the overall point is that the number of majors and number of graduates might be too low to support the number of T/TT faculty.)  Data on the typical teaching load for T/TT faculty in the Mathematics program is not given (even in the FTE detail sheet), so it is difficult to judge whether the program appropriately balances teaching and research for those faculty.	
<b>Reviewer: 3</b>	<b>Score:</b> 8	<b>Weighted Score:</b> 1.6
<b>Strengths:</b>	B2-K-12 Outreach programs (aid in UM recruitment). B3-Highly utilized tutor program. Data supports high productivity.	
<b>Weaknesses:</b>	None found.	

**4. QUALITY**

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<b>Reviewer: 1</b>	<b>Score:</b> <input type="text" value="7"/>	<b>Weighted Score:</b> <input type="text" value="1.4"/>
<b>Strengths:</b>	Their sophomore persistence rate is high. Above average students graduating with honors, and high honors. As well as students testing on average in top 25%.	
<b>Weaknesses:</b>	Job placement lacked any depth or backing.	
<b>Reviewer: 2</b>	<b>Score:</b> <input type="text" value="7"/>	<b>Weighted Score:</b> <input type="text" value="1.4"/>
<b>Strengths:</b>	The quantitative data (time to degree and sophomore persistence rates) are good (though as noted above, this is for the department--no information is given regarding whether the program's measures would be different).  The list of research awards/activities is very impressive.	
<b>Weaknesses:</b>	The mission for the Mathematics program is VERY teaching-oriented. Data on student outcomes is given (and is good), but data on instructor effectiveness is limited.	
<b>Reviewer: 3</b>	<b>Score:</b> <input type="text" value="9"/>	<b>Weighted Score:</b> <input type="text" value="1.8"/>
<b>Strengths:</b>	Data supports high quintile scores. -High testing average for graduates compared to national averages. -Beats campus average for graduating students with honors and high honors. -Program and faculty are consistently awarded, recognized, published at local and national levels.	
<b>Weaknesses:</b>	None found.	

**5. EFFICIENCY**

<b>Reviewer: 1</b>	<b>Score:</b> <input type="text" value="6"/>	<b>Weighted Score:</b> <input type="text" value="0.6"/>
<b>Strengths:</b>	High SCH per FTE average, and anecdotal evidence of professors adding in students over course cap, and maximizing course load. Incorporating use of online technology. Close to national average in SCH per faculty,	
<b>Weaknesses:</b>	Lacked justification to substantial efficiency use of FTE faculty who are tenured/tenured track.	
<b>Reviewer: 2</b>	<b>Score:</b> <input type="text" value="5"/>	<b>Weighted Score:</b> <input type="text" value="0.5"/>
<b>Strengths:</b>	It appears that this program is making efforts to become more efficient (fewer, somewhat larger sections, online courses, etc.).	
<b>Weaknesses:</b>	Adjuncts have been nearly eliminated from the department, but in some cases, the limited/strategic use of adjuncts can actually increase efficiency.	
<b>Reviewer: 3</b>	<b>Score:</b> <input type="text" value="7"/>	<b>Weighted Score:</b> <input type="text" value="0.7"/>
<b>Strengths:</b>	B1-Budget cuts have had clear impact shown by data collected by department. B2-They have responded efficiently by increasing section size and reducing number of sections but still meeting national averages and standards.	
<b>Weaknesses:</b>	None found.	

**6. OPPORTUNITY**

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<b>Reviewer: 1</b>	<b>Score:</b> <input type="text" value="7"/>	<b>Weighted Score:</b> <input type="text" value="1.05"/>
<b>Strengths:</b>	Use of engaging students where they are by implementing the co-requisite remediation model in courses to help improve retention. interdisciplinary efforts through Data Analytics course. Making efforts to partner with place through local k-12 events.	
<b>Weaknesses:</b>	Few weaknesses, but did not tie in Reinventing the Heart of the Curriculum that seemed most relevant because of the Gen-Ed influence of this program.	
<b>Reviewer: 2</b>	<b>Score:</b> <input type="text" value="7"/>	<b>Weighted Score:</b> <input type="text" value="1.05"/>
<b>Strengths:</b>	Efforts in data analytics and mathematics education seem to align well with UM's strategic opportunities.  The "co-requisite remediation model" for selected courses is an intriguing concept.	
<b>Weaknesses:</b>	The "co-requisite remediation model" is discussed as needing to subsidize one credit for participating students (the co-req meets for two hours per week, but student only pay for one credit). I'm not sure that the subsidy would be for a full additional credit, as the prep time for the co-req course may not be as intense as the prep time for a "typical" 3-credit course.  When discussing Big Data/Data Analytics, the report mentions partnerships with the Computer Science department. Partnering with the business school would also be helpful, as the large professional services firms are all at the forefront of data analytics.	
<b>Reviewer: 3</b>	<b>Score:</b> <input type="text" value="9"/>	<b>Weighted Score:</b> <input type="text" value="1.35"/>
<b>Strengths:</b>	B1-Active Tribal College outreach program. B2-High interdisciplinary activity with general education and major requirements for other majors. B3-"Co-Requisite Remediation Model" could help reduce time to graduation. Pilot program already taking place to prove new model. B4-Need additional resources for 200 level tutoring.	
<b>Weaknesses:</b>	None found. Very insightful and innovative.	