

# New Program Proposal

Date Submitted: 11/30/21 1:52 pm

Viewing: : **Data Science**

Last edit: 01/03/22 2:11 pm

Changes proposed by: rodock

Name of the school or college academic planner who you consulted with on this proposal.

Name
Elaine M Klein - L&S

## In Workflow

1. **STATISTICS Dept. Approver**
2. **L&S College Admin Reviewer**
3. L&S College Approver
4. APIR Admin
5. GFEC Approver
6. UAPC Approver
7. Registrar

## Approval Path

1. 11/30/21 1:59 pm  
Sara Rodock  
(rodock): Approved for STATISTICS Dept. Approver
2. 12/02/21 11:16 am  
Elaine Klein  
(emklein): Approved for L&S College Admin Reviewer
3. 12/23/21 9:26 am  
Elaine Klein  
(emklein): Rollback to STATISTICS Dept. Approver for L&S College Approver
4. 01/03/22 3:50 pm  
Sara Rodock  
(rodock): Approved for STATISTICS Dept. Approver

**Proposal Abstract/Summary:**

The University of Wisconsin-Madison proposes to establish a Master of Science in Data Science (MDS). MDS will be a new 131 program jointly administered by the Departments of Statistics and Computer Sciences. The development of the program responds to considerable student interest and fast growing employment opportunities. The program will provide students with abilities in computational and statistical thinking and skills, which may be combined with domain knowledge to address data-rich problems from diverse fields and various industries. Graduates will acquire data science competencies to think critically about data, and to manage, process, model and analyze data to obtain meaning and knowledge, and further to use data in responsible, ethical ways. The program will be comprised of 30 credits. The curriculum will address emerging, and rapidly growing areas of applied statistical and computing research and practice. Graduates may seek employment as data analysts and data scientists or pursue further education in data science, statistics, computer science, or related quantitative and computational fields.

## Basic Information

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Program State: Active

Type of Program: Degree/Major

Upload the Approved Notice of Intent and UW System Approval Memo.

[MS-Data Science NOI rev11\\_03\\_21.pdf](#)

[MSN MS-Data Science NOI Responses.pdf](#)

Upload completed draft of the full Board of Regents Authorization Proposal for this program.

[BOR\\_in-progress.pdf](#)

Who is the audience? Graduate or professional

Home Department: Statistics (STATISTICS)

School/College: College of Letters and Science

The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?

Yes

Describe procedures under which the coordinating/oversight committee will operate, including how the committee chair is appointed, to whom the chair reports, how participating faculty and staff are identified, provisions for transitions in the committee, and processes for interaction with the home department.

The MDS Program Committee (MDSPC) will provide oversight for the MDS program. The program committee will be housed in the Department of Statistics, which will provide necessary administrative functions (e.g., student admission and advising, curricular and financial services, and human resources operations for personnel responsible for these functions). The MDSPC will be responsible for curricular and budgetary decisions, such as credit rate charged to the program and curriculum and courses used to meet requirements, assessment of student learning, and academic program review. The MDSPC will be comprised of 2 faculty members appointed by the chair from each of the departments of Computer Sciences and Statistics, with the two department chairs serving as ex officio members. The committee may also include additional support staff as non-voting members. The program director will be elected by the MDSPC from voting members serving on the committee. Terms of service will be three years and two consecutive terms may be served.

Is this in the Graduate School?      Yes

Award:                      Master of Science

SIS Code:

SIS Description:

Transcript Title:        Data Science

Named Options:

Will this be offered as an additional major as well?      No

Is this a non-admitting master's degree?      No

Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

Role Type	Name (Last, First)	Email	Phone	Title
Department Chair	Wang, Yazhen	wang239@wisc.edu	608/262-3720	
Department Chair	Arpaci-Dusseau, Remzi	rharpaciduss@wisc.edu	608/263-7764	
Primary Dean's Office Contact	Klein, Elaine	emklein@wisc.edu	608/265-8484	

Role Type	Name (Last, First)	Email	Phone	Title
Faculty Director	Wang, Yazhen	wang239@wisc.edu	608/262-3720	
Primary Contact	Wang, Yazhen	wang239@wisc.edu	608/262-3720	

List the departments that have a vested interest in this proposal.

Departments
Computer Sciences (COMP SCI)
Mathematics (MATH)
College of Engineering (ENGINEERG)
School of Business (BUSINESS)
Information School (I SCHOOL)
Biostatistics and Medical Info (B M I)
Psychology (PSYCH)
Col of Agricultural & Life Sci (CALS)
Industrial and Systems Engr (IND SY EGR)
Educational Psychology (ED PSYCH)

Are all program reviews in the home academic unit up to date? Yes

Are all assessment plans in the home academic unit up to date? Yes

Are all assessment reports in the home academic unit up to date? Yes

Mode of Delivery:

Face-to-Face (majority face-to-face courses)

Will this program be part of a consortial or collaborative arrangement with another college or university? No

Will instruction take place at a location geographically separate from UW-Madison? No

Will this program have outside accreditation? No

Will graduates of this program seek licensure or certification after graduation? No

First term of student enrollment: Fall 2022 (1232)

Year of three year check-in to GFEC (3 years after first student enrollment):

2026

Year of first program review (5 years after first student enrollment):

2028

If this proposal is approved, describe the implementation plan and timeline.

Summer/Fall 2021: approval of 131 budget, Statistics and Computer Sciences MOA, NOI approval

By late November 2021: submission of Lumen Programs proposal

Mid-December 2021: L&S Curriculum Committee Meeting

Late-December 2021: APC Meeting

Late-January to early-February 2022: GFEC Meeting

EarlyFebruary 2022: Begin search process for Stats department 131 programs coordinator (deadline April, start June/July)

Mid-February 2022: UAPC Meeting

Late-February 2022: submission of documents for Regents meeting in June

Late-Spring semester 2022: appoint MDSPC chair and committee

June 2022: approval from Regents for fall start

July/August 2022: collect applications and admit first incoming cohort

September 2022: first cohort begins

## Rationale and Justifications

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Why is the program being proposed? What is its purpose?

The Department of Statistics, in conjunction with the Department of Computer Sciences, plans to develop a new 131 professional program: MS Data Science program. The program will be a joint effort between both departments, with Statistics serving as the home department. This program will build upon expertise and existing programs within the new School of Computing, Data and Information Sciences (CDIS) to offer a Data Science graduate-level program that includes core courses from Statistics and Computer Sciences and electives from these and other departments to give graduates the ability to address advanced level data science challenges.

The MDS program immerses students in data science. It is designed to provide students with the tools necessary to think critically, to compute efficiently, to model and analyze effectively, and to behave ethically with data. The MDS requires 30 credits that are divided between two areas: core courses (24 credits) and electives (6 credits). All students complete the 3 core categories (24 credits between Statistics, Computer Sciences, and Machine Learning) and two elective courses (6 credits).

What is its relation to the institution's mission? (Consider the mission broadly as a major research university with missions in teaching, research, service, and the Wisconsin Idea.) How does it contribute to the mission of the sponsoring unit(s)?

At the UW-Madison institutional level the proposed new program aligns with the new 2020-2025 strategic priorities. Specific priorities include excellence in research and scholarship; ensure the continued vitality, competitiveness, and strength of their graduate and professional programs, excellence in teaching and educational achievement; expand educational programming in areas of high student demand, while maintaining the broad-based strength of the two departments' educational enterprise, and a vibrant campus community; enhance diversity among their students, faculty, and staff and build upon their strong commitment to diversity to create a welcome, empowered, and inclusive community are paramount in the plans for the new program.

Within CDIS, the new program will strive to meet the mission of contributing to the public good and enriching civil society through researching, teaching and outreach; educating responsible leaders, critical thinkers, and creative innovators; and fostering prosperity in the state, region, and the world.

These priorities are expected to be achieved through offering a highly ranked program based on best practices within data science, where new technologies and tools are implemented within the curriculum. Additionally, there is a plan to offer a summer "onboarding" option to students who are excellent candidates, but perhaps lack an important prerequisite course or two to increase the diversity of students in the program.

Do current students need or want the program? Provide evidence.

There is intense demand and interest in data science and ample employment opportunities for MDS graduates; the creation of a MDS program is highly warranted. The growing demand and interest from students for skills in the quantitative and computing fields is evident from the growth of enrollment in graduate programs in Computer Sciences and Statistics in the past several years. The program goal is to offer an MDS program complementary to existing programs in these two departments that better meets the desire and serves the need from both students and employers.

What is the market, workforce, and industry need for this program? Provide evidence.

Data science is one of the fastest growing employment sectors in the nation and in Wisconsin.

Although there is not a specific category labeled "Data Scientist" in the Occupational Outlook Handbook (OOH) from the Bureau of Labor Statistics, the job outlook in the period 2019-29 for Statisticians is projected to grow by 35% and for Computer and Information Research Scientists to grow by 15% (both classified as "much faster than average"). Both areas list the "typical entry-level education" for these fields to be a Master's degree. It is reasonable to predict that students graduating from a program such as this would be well positioned to meet continued demand for employees with these skills.

The Division of Continuing Studies has provided us with an Occupation Analysis from Burning Glass Technologies for Data Scientists in the midwest (information retrieved December 2020). In this report one can see within the job metrics the projected growth is +19.5% for the next 10 years, average demand is 2,619 postings during 2020, and the median salary is \$111,304. In analyzing technical skills necessary to meet this demand, topics such as data science, python, machine learning, R, and predictive modeling are already among the most desired skills and have projected growth for demand in the next 2 years. The proposed program will provide education to students in these important areas.

How does the program represent emerging knowledge, or new directions in professions and disciplines?

Our world increasingly depends on data and computing to produce knowledge and to make decisions. Data Science has emerged as a new field to support these data-driven activities by integrating, synthesizing, and generating ideas, concepts, and tools from statistics, computer science, and domain fields. The proposed Data Science program provides students with training on emerging knowledge that will enable them with skills to solve problems in scientific studies, industry developments, government activities, and social and societal functions.



In what ways will the program prepare students through diverse elements in the curriculum for an integrated and multicultural society (may include diversity issues in the curriculum or other approaches)?

The MDS program will address diversity issues in all aspects of the program development, recruitment, and implementation. Students, staff and instructors are expected to be aware of, sensitive to, and responsive to all forms of diversity in professional activities, including teaching, learning, and advising. The program curriculum involves Stat and CS courses, and diversity issues will be infused into the program curriculum through considerable flexibility and various options in coursework and learning process to accommodate diverse groups and different populations and to increase cultural knowledge and understanding as well as cross-racial interactions. In order to better recruit and mentor a diverse student body, the faculty and staff plan to develop a summer boot camp for interested students who don't meet the program prerequisites, or who wish to brush up their skills before returning to a graduate program. The planning for the boot camp will occur after the first year of the program, when we have a better idea of students' level of preparation coming into the program

What gap in the program array is it intended to fill?

Both the Statistics and Computer Sciences Departments offer professional, 131 MS programs, and they see this new MDS program as complementary to these existing programs. The MS Computer Sciences: Professional Master's Program is more general and spans a broad range of computer sciences topics. The MS Statistics: Option Data Science program is a data science oriented program but is focused on coursework in statistics and requires a stronger quantitative background for admission. This new program would allow students to have a third option that provides training spanning both fields as it specifically relates to data science.

There are other existing programs on campus, through a variety of departments, that offer data science and data analytics graduate education. These programs are all "domain" based and are intended to teach students about data analytics or science within a specific context such as biomedicine, business, psychology, or engineering. For this reason the new MS Data Science program will not overlap with these programs.

## Diversity and Inclusion

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Describe how the proposed program curriculum and learning outcomes will advance inclusive excellence. Discuss specific components and requirements within the curriculum that will offer students opportunities and learning activities to engage in diversity with respect to perspectives, theories, practices, and populations different from themselves. If internships or clinical, practicum, or experiential learning experiences will be required, discuss how students will have access to diverse practice settings.

In alignment with the College of Letters and Sciences commitment to diversity, the proposed MDS program will continue along with the other MS programs to address diversity and equity within the program curriculum. The curriculum will strive to ensure that students can demonstrate professional communications, teamwork, and are aware of culture competencies. This will be demonstrated through the assessment of our learning goals of “communicates data science concepts and results clearly” and “adheres to principles of ethical and professional conduct in data science.”

Discuss how the proposed program will actively pursue an equity in student recruitment, access, retention, and degree completion. Describe specific strategies to identify and recruit a diversified student population for programs that do direct admissions. Include evidence-based and effective practices. Provide examples of academic and student support services that will be implemented to support student learning success and completion.

In Summer 2021 we hired a new Student Services Coordinator where 25% of their position is in recruitment efforts for all of the Statistics offered graduate programs. Prior to this start of this new person, another staff person had worked to identify best practices of other similar departments at UW-Madison so that we begin to create a comprehensive and intentional recruitment strategy. Due to COVID, many of these plans have been delayed. Our new recruitment staff person has begun to implement many of these strategies. Below is a summary of the proposal and then two specific highlights of new activities that we have begun this year:

Pre-application: engage in a variety of recruitment opportunities such as Statistics conferences, minority recruiting conferences (e.g., SACNAS), explore smaller conferences to have a broader reach where faculty attend to build connections with prospective applicants; create more modern recruitment materials including updating our website to be more student focused and have materials/swag for conferences

Application: offer fee-waivers to applicants from diverse backgrounds; have a more pro-active communication strategy during the process to provide transparency; revamp the visit program/schedule to better demonstrate our climate and build community. These are also strategies used by the CS department in their recruitment.

Pre-matriculation: assign “faculty contacts” to each admitted applicant who will be tasked with having regular communication with candidates; explore opportunities to connect applicants with alumni

Post-admission: track how applicants came to us to begin to identify successful pathways; explore additional pipelines and pathways

We understand that creating and launching a systematic recruitment process is a large undertaking and some of it not possible during COVID. We did pick two activities that are possible this past year to begin this process and ones in particular that will help with recruitment of a diverse student population. The first is that the department attended the 2020 SACNAS conference and then providing connections from interested students to faculty. The second is the plan is to award 50% scholarships to highly qualified, AOF eligible students (as indicated in the Applicant Review System) to help recruit and defray costs for students to enter the MDS program. This scholarship has been implemented in the current Data Science option within the MS Statistics and has been successful.

As we continue to implement the new recruitment strategy, we will also develop better mechanisms to review student progress and assure that there aren't inequities between students of different demographics.

The Computer Sciences department hired a new diversity/outreach specialist in 2021 who focuses on increasing the percentage of women in computing, as well as supporting broader diversity efforts. Also, following the recruitment efforts of the Masters of Science in Computer Science: Professional Program, the Computer Sciences Department will advertise the MDS program at events like Grace Hopper Celebration of Women in Computing and Tapia Celebration of Diversity in Computing, which are conferences designed to promote diversity and connect students, faculty, researchers and professionals in computing from all backgrounds and ethnicities. We also offer a limited number of free passes for students from underrepresented backgrounds to participate in these conferences. In addition, future program informational sessions will be provided to companies like Shopbop, American Family, Google, along with communities like Starting Block and Capital Entrepreneurs. Finally, the CS admissions committee works to ensure that the diversity of the accepted students matches the diversity of the applicants -- that we are not disproportionately rejecting underrepresented students. We will implement similar strategies for the MDS program.

Consider how the proposed program will ensure equity in recruiting and hiring of faculty, instructional staff, and staff who will oversee the program curriculum, professional/career development experiences, and research/scholarship where relevant.

The Department of Statistics and the Department Computer Sciences will continue with their efforts to diversify the faculty body. On the faculty recruitment front, Statistics and Computer Sciences have focused on increasing the number of faculty who come from underrepresented populations, including increasing the number of female faculty in the department. As part of this effort, our hiring committee leaders go through inclusive and diversity hiring training programs. The departments have reached out to alumni and colleagues in departments across the country to recruit a diverse population of candidates to apply for our faculty positions. In addition to these recruitment efforts, the departments will promote training to raise faculty awareness of diversity and inclusion issues prevalent at UW-Madison.

Note any plans or strategic initiatives at the university that are closely linked with the development of the proposed program. Note how efforts will align with the appropriate and applicable accreditation standards that address diversity where relevant. To the extent that the response to questions related to diversity, equity, and inclusion are connected to plans at the department, school/college or university, make those connections explicit where relevant.

During the past few years, the Department of Statistics has done some analysis of our departmental climate to be in alignment with campus expectations and goals. Our Climate Committee continues to assess the environment and provide improvements. One specific goal of the committee has been to provide more departmental events to help build community across all faculty, staff, and students.

The Department of Computer Sciences has a diversity committee that is working to develop department-wide plans for broadening participation from underrepresented groups, and is currently working on a department diversity statement. The CS department also hosts inclusive teaching training for faculty and instructional staff. We did a climate survey of students last year, and plan to continue them every year, and did a climate survey of faculty and staff in 2020. Finally, the CS department recently received funding to increase the participation of women in computing, and is developing a strategic plan in this direction.

The Department of Statistics and Department of Computer Sciences are now in the School of Computing, Data, and Information Sciences (CDIS). CDIS has five focus areas and area three is "Inclusion – Addressing under representation and inclusivity problems in the STEM fields and bringing together diverse populations, points of view and approaches." Via the CDIS diversity committee we have begun to see a shared effort across departments to increase diversity, equity, and inclusion efforts by supporting each department's work and commitment, all of which include the Statistics and Computer Sciences Departments.

## Faculty and Staff Resources

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List the core program faculty and staff with title and departmental affiliation(s) who are primarily involved and will participate in the delivery and oversight.

Name (Last, First)	Department	Title
Wang, Yazhen	Statistics (STATISTICS)	Department Chair
Arpaci-Dusseau, Remzi	Computer Sciences (COMP SCI)	Department Chair
Yandell, Brian	Statistics (STATISTICS)	Professor
Venkataraman, Shivaram	Computer Sciences (COMP SCI)	Assistant Professor
Wright, Stephen	Computer Sciences (COMP SCI)	Professor
Zhu, Jun	Statistics (STATISTICS)	Professor

What resources are available to support faculty, staff, labs, equipment, etc.?

The Department of Statistics will be the administrative home and will collaborate with the Department of Computer Sciences to oversee the MDS program once it is created. Resources necessary for the program such as the support of faculty, staff, lab, and equipment will be funded by revenues based on tuition paid by students enrolled in the program. A revenue generating budget worksheet is attached to address the needed resources.

Program advisor(s) with title and departmental affiliation(s).

Describe how student services and advising will be supported.

Advising will be provided to students by the selected programs manager, to be hired Spring 2022. Additionally, other student services such as recruitment, application processing, degree progress monitoring, and processing of warrants will be done by the program manager and other staff identified in the budget.

Confirm that the program advisor(s) or coordinator(s) have been consulted and reviewed this proposal. Yes

Select the Graduate Research Scholars Community for this program.

Letters & Sciences Community of Graduate Research Scholars

## Resources, Budget, and Finance

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Is this a revenue program? Yes

Upload the 131 spreadsheet.

[MDS Budget 6-8-2021-YazhenWang-LS-upload.xlsx](#)

What is the tuition structure for this program?

Market-based tuition - separate proposal to be submitted

Select a tuition increment:

\$1,600/credit

What is the rationale for selecting this tuition increment?

For students enrolled in the MDS program, a per credit tuition rate of \$1,600 per credit hour will apply. The tuition rate is the same as the tuition rate used in the existing Stat 131 program. It was selected by carrying out market analysis and comparing tuition rates charged by data science programs in peer institutions. This market-based tuition rate is proposed consistent with the Service Based Pricing policy (SYS 130 App. B and App. C respectively). The tuition rate will be reviewed annually by the program governance committee, but no tuition increases are expected within a three-year planning timeframe.

Upload Market-based tuition proposal here:

[ke\\_Market-BasedTuitionPolicyRequestFormMDS-11-22 \(002\).pdf](#)

Provide an overview of plans for funding the program including but not limited to program administration, instructional/curricular delivery, technology needs and program assessment.

The 131 professional master program on data science is jointly proposed by Departments of Statistics and Computer Sciences, with Statistics Department serving as its administrative home. Both departments have very large traditional programs and 131 professional master programs. This program will build upon existing resources within the two departments. The resources include available faculty, staff, courses, technology, and revenues generated from existing 131 programs as well as credentials to successfully create 131 professional MS programs with sound program learning outcomes and assessment plans. Like our other 131 MS programs, it is anticipated that the program will be on high demand. As the funding plan is described in the revenue generating budget worksheet and MOA, the program will be initially launched by these existing resources and become self-funded as it grows.

What is the marketing plan?

Data science is one of the fastest growing employment sectors in the nation and in Wisconsin. Although there is not a specific category labeled "Data Scientist" in the Occupational Outlook Handbook (OOH) from the Bureau of Labor Statistics, the job outlook in the period 2019-29 for Statisticians is projected to grow by 35% and for Computer and Information Research Scientists to grow by 15% (both classified as "much faster than average"). Both areas list the "typical entry-level education" for these fields to be a Master's degree. It is reasonable to predict that students graduating from a program such as this would be well positioned to meet continued demand for employees with these skills.

The Division of Continuing Studies has provided us with an Occupation Analysis from Burning Glass Technologies for Data Scientists in the midwest (information retrieved December 2020). In this report one can see within the job metrics the projected growth is +19.5% for the next 10 years, average demand is 2,619 postings during 2020, and the median salary is \$111,304. In analyzing technical skills necessary to meet this demand, topics such as data science, python, machine learning, R, and predictive modeling are already among the most desired skills and have projected growth for demand in the next 2 years. The proposed program will provide education to students in these important areas.

All programs in CS and Stat departments are very popular, and these programs include traditional programs and revenue generating MS programs. Both departments have experiences to market programs and recruit students when launching new programs. The marketing plan includes setting program website and reaching out to industry and universities through colleagues and alumni as well as existing recruiting revenues.

We hope to leverage current and future recruitment activities for the Computer Science PMP and Statistics and Data Science programs for the new MS Data Science program. Unfortunately, due to COVID for the last two years, some recruitment initiatives had to be put on hold. In CS they attend the TAPIA and Grade Hopper conferences to recruit prospective students, Statistics attends SACNAS, and both programs participate in a number of Graduate School fairs. Additionally, both programs hope to increase recruitment efforts by offering more online information sessions, connecting with local companies, and targeted marketing to mid-west regional comprehensive institutions. We hope to collaborate with DCS on recruiting efforts to make the most of all of the resources available from both DCS and the Graduate School.

We wouldn't just rely on the popularity of the field, but partner with DCS as well. For FY 23 Data Science would be part of a group "on-campus accelerated programs" campaign for free. This campaign would feature multiple programs on campus in a rotating slide deck, and multiple group-level search terms. This marketing reach is midwest regional only, which is very much one of our key target groups for this new program.

Overall, given the high demand on data science, it is anticipated that the target enrollment level can be easily met with the marketing plan.

Describe resource and fiscal considerations - A. Provide an overview of plans for funding the program including program administration, instructional/curricular delivery, academic and career advising, technology needs, marketing (if relevant), financial aid and scholarships (if relevant), capacity for student learning outcomes assessment and program review.

The program will be funded by revenues based on tuition paid by students enrolled in the program. The revenue generating budget worksheet and MOA between the two departments are attached to provide the funding plans. Some details are given below. The program will be a joint effort between the departments of Computer Sciences and Statistics. This program will build upon expertise and existing programs within the new School of Computing, Data and Information Sciences (CDIS). Statistics Department will serve as the administrative home of MDS and will undertake the program administrative needs such as program administration, advising, and technology services. A joint governance committee will be formed to oversee the program development such as curricular changes, program review, and program assessment. Both departments deliver their own courses taken by MDS students. There are charges (currently \$600 per credit for 131 programs) for elective courses taken by program students outside Statistics and Computer Sciences. The budget worksheet and MOA show that while Stat will administer the program, Stat and CS view the MDS as a joint financial partnership.

Describe resource and fiscal considerations - B. Are the faculty, instructional staff and key personnel existing or new faculty and staff? If they already serve existing programs, how are they able to add this workload? If new faculty and staff will be added, how will they be funded?

All are existing courses except for a few new courses. The program will start with 25 enrollments during the first three years. Most of students will enroll in existing classes, and there are a few new classes designed for students in the proposed program. It is expected to rely on existing faculty, staff, and key personnel. There may need one or two new faculty and staff for the proposed program. Both departments have existing 131 programs with 131 surplus funds to initially fund the needed new faculty and staff. In fact, both Stat and CS departments hire multiple faculty and staff each year. As the revenue generating budget worksheet indicates, the proposed program will grow and become self-funded. The revenues generated from paid tuition will cover all program expenses and make sizable profit.

Describe resource and fiscal considerations - C. What impacts will the program have on staffing needs beyond the immediate program? How are those needs being met?

Department of Statistics has a staff team to take care of existing 101 and 131 programs. Furthermore, the department will hire a new program manager in Spring 2022. As the proposed program will start with relatively small enrollment, the existing st



Describe resource and fiscal considerations - D. For graduate programs, describe plans for funding students including but not limited to funding sources and how funding decisions will be made.

The proposed MS program on Data Science is a 131 program, and students are self-funded. Highly qualified students will be offer a 25% scholarship and highly qualified AOF eligible students will be offered a 50% scholarship. These scholarships will be awarded by the admission committee.

UW System Administration and the Board of Regents require submission of budget information in a specific format. These forms will be completed in collaboration with APIR after school/college approval and before submission to UWSA for Board consideration. These forms are uploaded here by APIR.

Does the program or change require substantial new resources other than those just described? Describe the needs. Confirm that the dean is committed to providing the resources.

There are no substantial new resources other than those described.

Are new Library resources needed to support this program?

No

Describe plans for funding students including but not limited to funding sources and how funding decisions are made.

The proposed MS program on Data Science is a 131 program, and students are self-funded. Highly qualified students will be offer a 25% scholarship and highly qualified AOF eligible students will be offered a 50% scholarship. These scholarships will be awarded by the admission committee.

## Curriculum and Requirements

Guide Admissions/How to Get In tab

Approved Shared Content from /shared/graduate-school-admissions/

Last Approved: Apr 15, 2021 12:15pm

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website. Graduate admissions is a two-step process between academic programs and the Graduate School. **Applicants must meet the minimum requirements of the Graduate School as well as the program(s).** Once you have researched the graduate program(s) you are interested in, [apply online](#).

Fall Deadline	March 15
Spring Deadline	The program does not admit in the spring.
Summer Deadline	The program does not admit in the summer.
GRE (Graduate Record Examinations)	Not Required.

English Proficiency Test	Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements ( <a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a> ).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation	2 required, 3 recommended
Required	

## REQUISITES FOR ADMISSION

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Applicants to the MS Data Science program should have completed the following courses equivalent to the UW-Madison courses listed below:

<b>Calculus and Mathematical Foundation, complete all below</b>		
<a href="#"><u>MATH 221</u></a>	Calculus and Analytic Geometry 1	5
<a href="#"><u>MATH 222</u></a>	Calculus and Analytic Geometry 2	4
<a href="#"><u>MATH 340</u></a>	Elementary Matrix and Linear Algebra	3
<b>Programming Foundation, select one from the list below</b>		
<a href="#"><u>COMP SCI 220</u></a>	Data Science Programming I	
<a href="#"><u>COMP SCI 300</u></a>	Programming II	
<a href="#"><u>COMP SCI 320</u></a>	Data Science Programming II	
<b>Recommended previous coursework of significant experience in R</b>		
<a href="#"><u>STAT 303</u></a> & <a href="#"><u>STAT 304</u></a> & <a href="#"><u>STAT 305</u></a>	R for Statistics I and R for Statistics II and R for Statistics III	3
<a href="#"><u>STAT 433</u></a>	Data Science with R	3

### Degree Requirements

Students are required to have completed their BS/BA degree prior to the first semester as an MS Data Science student.

Describe plans for recruiting students to this program.

There is intense demand and interest in data science and ample employment opportunities for MDS graduates, the creation of a MDS program is highly warranted. The growing demand and interest from students for skills in the quantitative and computing fields is evident from the growth of enrollment in graduate programs in Computer Sciences and Statistics in the past several years. Both Departments have existing 131 programs, and this joint program will offer a MDS program as complementary to these existing programs that better meets the desire and serves the need from both students and employers.

Our current recruiting avenues will be used to recruit students to this program. As mentioned above this includes attending important conferences to connect with prospective applicants, participating in campus events like fairs through the Graduate School, coordinating with DCS on recruitment efforts, offering online information sessions, directly connecting with local employers, and marketing to mid-west regional comprehensive institutions.

It is anticipated that the proposed program will be on high demand.

What is the recruiting and admissions strategy for underrepresented students?

Like Science, Technology, Engineering and Mathematics (STEM) fields, Data Science has historically been and is currently lacking in representation of under-served populations including both ethnic minorities and women. It is very important to increase representation of women and minorities and address diversity and inclusion issues. The MDS program will partner with existing programs and offices on campus to develop diversity agendas and admission strategy and move this initiative forward. The actions include:

1. collaborating with campus offices and programs such as UW-Madison’s Division of Diversity, Equity, and Educational Achievement (DDEEA) and the Center for Academic Excellence (CAE) in College of Letters & Science to make students aware of diversity and inclusion, recruit underrepresented minorities, and promote strong effort to retention and degree completion of the diverse students;
2. participating events that draw together women and underrepresented student populations, such as Association for Women in Statistics, Association for Women in Computing, state and regional professional associations such as Midwest User Experience conference and state chapters of the International Global Data Community (DAMA);
3. recruiting international students to expose students to different cultures and promote international interaction and collaboration;
4. providing a summer program and offering targeted scholarships specifically for underrepresented minorities;
5. making outreach effort to regional colleges with high underrepresented minority populations about opportunities in MDS at UW-Madison;
6. faculty and staff recruitment into the program will comply with campus guidelines and recommendations for ensuring diversity and inclusion of the program.
7. offer a 50% scholarship to highly qualified AOF eligible students.

Projected Annual Enrollment:

Year	Projected Enrollment
Year 1	25
Year 2	49
Year 3	49
Year 4	64
Year 5	93

Describe plans for supporting enrollments that are much higher or much lower than the anticipated enrollment.

Both departments have large 101 and 131 programs, and the proposed program is largely based existing courses. It is expected that the program will be on high demand, and we plan to cap the enrollment by the target level. If enrollments are lower than the anticipated enrollment, there is little impact on the program instructions, as most of students are enrolled in existing classes.

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

Approved Shared Content from /shared/graduate-minimum-degree-requirements-and-satisfactory-progress/

Last Approved: Apr 15, 2021 12:16pm

## Minimum Graduate School Requirements

Review the Graduate School minimum [academic progress and degree requirements](#), in addition to the program requirements listed below.

### MODE OF INSTRUCTION

Face to Face	Evening/Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	Yes

Approved Shared Content from /shared/graduate-school-mode-instruction-definitions/

Last Approved: Apr 15, 2021 12:16pm

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. Students are able to complete a program with minimal disruptions to careers and other commitments.

**Evening/Weekend:** Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW-Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

## CURRICULAR REQUIREMENTS

Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	Half of degree coursework (15 credits out of 30 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide ( <a href="https://registrar.wisc.edu/course-guide/">https://registrar.wisc.edu/course-guide/</a> ).
Overall Graduate GPA Requirement	3.00 GPA required.
Other Grade Requirements	None.
Assessments and Examinations	None.
Language Requirements	No language requirements.

## REQUIRED COURSES

<b>Statistics Core, complete all 3 courses below</b>	<b>9</b>
<a href="#"><u>STAT 611</u></a> Statistical Models for Data Science	3
<a href="#"><u>STAT 612</u></a> Statistical Inference for Data Science	3
<a href="#"><u>STAT 613</u></a> Statistical Methods for Data Science	3
<b>Computer Sciences Core, select 1 course from each category</b>	<b>9</b>
Algorithms	
<a href="#"><u>COMP SCI/ E C E/ I S Y E 524</u></a> Introduction to Optimization	
<a href="#"><u>COMP SCI 577</u></a> Introduction to Algorithms	
<a href="#"><u>COMP SCI/ I S Y E/ MATH/ STAT 726</u></a> Nonlinear Optimization I	
Systems	
<a href="#"><u>COMP SCI 537</u></a> Introduction to Operating Systems	
<a href="#"><u>COMP SCI 564</u></a> Database Management Systems: Design and Implementation	

<a href="#">COMP SCI 640</a>	Introduction to Computer Networks	
<a href="#">COMP SCI 642</a>	Introduction to Information Security	
<a href="#">COMP SCI 739</a>	Distributed Systems	
<a href="#">COMP SCI 744</a>	Big Data Systems	
<a href="#">COMP SCI 764</a>	Topics in Database Management Systems	
Humans and Data		
<a href="#">COMP SCI 765</a>	Data Visualization	
<a href="#">COMP SCI/ ED PSYCH/ PSYCH 770</a>	Human-Computer Interaction	
<b>Machine Learning Core, select 2 courses from the list below</b>		<b>6</b>
<a href="#">COMP SCI 540</a>	Introduction to Artificial Intelligence	3
<a href="#">COMP SCI 760</a>	Machine Learning	3
<a href="#">COMP SCI/ E C E 761</a>	Mathematical Foundations of Machine Learning	3
<a href="#">COMP SCI 762</a>	Advanced Deep Learning	3
<a href="#">STAT 451</a>	Introduction to Machine Learning and Statistical Pattern Classification	3
<a href="#">STAT 453</a>	Introduction to Deep Learning and Generative Models	3
<a href="#">STAT 615</a>	Statistical Learning	3
<b>Data Science Electives, select 6 credits from the courses below <sup>1</sup></b>		<b>6</b>
<a href="#">COMP SCI/E C E/ I S Y E 524</a>	Introduction to Optimization	3
<a href="#">COMP SCI 537</a>	Introduction to Operating Systems	4
<a href="#">COMP SCI 564</a>	Database Management Systems: Design and Implementation	4
<a href="#">COMP SCI/ B M I 576</a>	Introduction to Bioinformatics	3
<a href="#">COMP SCI 577</a>	Introduction to Algorithms	4
<a href="#">COMP SCI 640</a>	Introduction to Computer Networks	3
<a href="#">COMP SCI 642</a>	Introduction to Information Security	3
<a href="#">COMP SCI 702</a>	Graduate Cooperative Education	1-2

<a href="#"><u>COMP SCI/ I SY E/ MATH/ STAT 726</u></a>	Nonlinear Optimization I	3
<a href="#"><u>COMP SCI 736</u></a>	Advanced Operating Systems	3
<a href="#"><u>COMP SCI 739</u></a>	Distributed Systems	3
<a href="#"><u>COMP SCI 744</u></a>	Big Data Systems	3
<a href="#"><u>COMP SCI 763</u></a>	Security and Privacy for Data Science	3
<a href="#"><u>COMP SCI 764</u></a>	Topics in Database Management Systems	3
<a href="#"><u>COMP SCI 765</u></a>	Data Visualization	3
<a href="#"><u>COMP SCI 766</u></a>	Computer Vision	3
<a href="#"><u>COMP SCI 769</u></a>	Advanced Natural Language Processing	3
<a href="#"><u>COMP SCI/ ED PSYCH/ PSYCH 770</u></a>	Human-Computer Interaction	3
<a href="#"><u>COMP SCI 784</u></a>	Foundations of Data Management	3
<a href="#"><u>COMP SCI 799</u></a>	Master's Research	1-9
<a href="#"><u>COMP SCI/ E C E/ STAT 861</u></a>	Theoretical Foundations of Machine Learning	3
<a href="#"><u>L I S 461</u></a>	Data and Algorithms: Ethics and Policy	3-4
<a href="#"><u>STAT 303</u></a> & <a href="#"><u>STAT 304</u></a> & <a href="#"><u>STAT 305</u></a>	R for Statistics I and R for Statistics II and R for Statistics III	3
<a href="#"><u>STAT 349</u></a>	Introduction to Time Series	3
<a href="#"><u>STAT 351</u></a>	Introductory Nonparametric Statistics	3
<a href="#"><u>STAT 411</u></a>	An Introduction to Sample Survey Theory and Methods	3
<a href="#"><u>STAT 421</u></a>	Applied Categorical Data Analysis	3
<a href="#"><u>STAT 433</u></a>	Data Science with R	3
<a href="#"><u>STAT 443</u></a>	Classification and Regression Trees	3
<a href="#"><u>STAT 456</u></a>	Applied Multivariate Analysis	3
<a href="#"><u>STAT 461</u></a>	Financial Statistics	3
<a href="#"><u>STAT/ COMP SCI 471</u></a>	Introduction to Computational Statistics	3
<a href="#"><u>STAT 575</u></a>	Statistical Methods for Spatial Data	3



<a href="#">STAT 701</a>	Applied Time Series Analysis, Forecasting and Control I	3
<a href="#">STAT 760</a>	Multivariate Analysis I	3
<a href="#">STAT 761</a>	Decision Trees for Multivariate Analysis	3
<a href="#">STAT 771</a>	Statistical Computing	3
<a href="#">I SY E 620</a>	Simulation Modeling and Analysis	3
<a href="#">I SY E 624</a>	Stochastic Modeling Techniques	3
<a href="#">I SY E/ COMP SCI 719</a>	Stochastic Programming	3
<a href="#">I SY E/ COMP SCI 723</a>	Dynamic Programming and Associated Topics	3
<a href="#">I SY E/COMP SCI/ MATH 728</a>	Integer Optimization	3

1

Courses listed both as core course and as an elective may count toward either the requirement, but not both.

Total credits required:

30

Guide Graduate Policies tab

Approved Shared Content from </shared/graduate-school-policies/>

Last Approved: Apr 15, 2021 12:16pm

## Graduate School Policies

The [Graduate School's Academic Policies and Procedures](#) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

## Program Policies

### **PRIOR COURSEWORK**

#### Graduate Work from Other Institutions

With program approval, students are allowed to count no more than 9 credits of graduate coursework from other institutions toward the graduate degree credit and graduate coursework (50%) requirements. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

#### UW–Madison Undergraduate

With program approval, up to 7 statistics credits from a UW–Madison undergraduate degree are allowed to count

With program approval, up to 7 statistics credits from a UW–Madison undergraduate degree are allowed to count toward minimum graduate degree credits. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

### UW–Madison University Special

With program approval, up to 15 statistics credits completed at UW–Madison while a University Special student at the 300 level or above are allowed to count toward minimum graduate degree and graduate residence credit requirements. Of these credits, those at the 700 level or above may also count toward the minimum graduate coursework (50%) requirement. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

## PROBATION

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Students are required to follow all of the requirements listed in the program handbook (INSERT LINK) for maintaining satisfactory academic program. Students who do not make satisfactory academic progress for multiple semesters may be dismissed from the program.

## ADVISOR / COMMITTEE

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Students are required to communicate with their advisor near the beginning of each semester to discuss course selection and progress.

## CREDITS PER TERM ALLOWED

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15 credits

## TIME CONSTRAINTS

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Students are expected to complete the program in 3-4 semesters. Students who wish to pursue the program part time must receive permission from the program chair.

## GRIEVANCES AND APPEALS

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Approved Shared Content from /shared/graduate-school-grievance-policy/

Last Approved: Apr 15, 2021 12:17pm

These resources may be helpful in addressing your concerns:

[Bias or Hate Reporting](#)

[Graduate Assistantship Policies and Procedures](#)

[Hostile and Intimidating Behavior Policies and Procedures](#)

[Office of the Provost for Faculty and Staff Affairs](#)

[Dean of Students Office](#) (for all students to seek grievance assistance and support)

[Employee Assistance](#) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)

[Employee Disability Resource Office](#) (for qualified employees or applicants with disabilities to have equal employment opportunities)

[Graduate School](#) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)

[Office of Compliance](#) (for class harassment and discrimination, including sexual harassment and sexual violence)

[Office of Student Conduct and Community Standards](#) (for conflicts involving students)

[Ombuds Office for Faculty and Staff](#) (for employed graduate students and post-docs, as well as faculty and staff)

[Title IX](#) (for concerns about discrimination)

Approved Shared Content from /shared/letters-science-grievance-policy/

Last Approved: Apr 22, 2021 10:10am

Students should contact the department chair or program director with questions about grievances. They may also contact the L&S Academic Divisional Associate Deans, the L&S Associate Dean for Teaching and Learning Administration, or the L&S Director of Human Resources.

## **OTHER**

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The MS Data Science option is unique and does not allow students to accept a tuition remitting assistantship, hold multiple positions that would result in tuition remission, or to be concurrently enrolled in another university program or enrolled in courses outside of the MS Data Science curriculum—see here ([LINK TO HANDBOOK PAGE](#)) for more details.

Discuss expected progress to degree and time to degree. For undergraduate programs discuss considerations for supporting students to complete the degree in four academic years.

The program is designed for two years. The program governance committee will set criteria for student admission, and a summer program will be provided to augment the admission criteria.

Here are some examples of how students might complete the program given different backgrounds and preferred pacing, all courses unless noted otherwise are expected to be three credits

-2 year graduation

-Fall 1: STAT 611, algorithms, systems

-Spring 1: STAT 612, visualizations, machine learning 1

-Fall 2: STAT 613, machine learning 2, elective 1

-Spring 2: elective 2

-1.5 year graduation, has 1 qualified undergraduate elective course to apply to MDS (elective 1)

-Fall 1: STAT 611, algorithms, systems

-Spring 1: STAT 612, visualizations, machine learning 1

-Fall 2: STAT 613, machine learning 2, elective 2

-2 year + summer graduation, admitted with deficiencies

-Summer 1: MATH 340, COMP SCI 220 (4 cr)

-Fall 1: STAT 611, algorithms, STAT 303 (1 cr)

-Spring 1: STAT 612, systems, machine learning 1

-Fall 2: STAT 613, visualizations, machine learning 2

-Spring 2: elective 1, elective 2

## Program Learning Outcomes and Assessment

List the program learning outcomes.

	<b>Outcomes – enter one learning outcome per box. Use the green + to create additional boxes.</b>
1	Demonstrates understanding of theories, methodologies, and computation as tools to solve complex problems in data science.
2	Selects or adapts appropriate data science approaches and uses or develops best practices in data-driven applications.
3	Synthesizes information, organizes insights, and evaluates impact pertaining to questions for studies involving empirical data.

<b>Outcomes – enter one learning outcome per box. Use the green + to create additional boxes.</b>	
4	Communicates data science concepts and results clearly.
5	Adheres to principles of ethical and professional conduct in data science.

*When learning outcomes are changed, a new assessment plan must be uploaded.*

Summarize the assessment plan.

The assessment plan for this program complies with UW-Madison assessment requirements that programs engage “in at least one assessment activity each year, which should include at least one direct assessment within a 3 year period.” The assessment strategy will rely on evidence provided by students, faculty and staff with direct and indirect relevance to learning objectives.

The MDS program director will prepare an annual assessment report that includes data summaries on all learning outcomes, and student satisfaction with academic advising, orientation activities, student services, climate and other elements of the student experience. The report will also point out areas for improvement and make recommendations for changes to the program. In consultation with the department executive committees, department chairs will review the report at the annual planning meetings and decide on recommended changes. The report will be submitted to the UW-Madison Provost’s office the fall of each year as required by campus. Data collected will also be used as to prepare 2 and 5 year reports for the Letters & Science college level review and Graduate School reviews which assess programs on the degree to which they meet admissions, retention and graduation rates among different subsets of students, the degree to which revenue programs meet financial goals and overall student and staff satisfaction with programs. The MDS program is not accredited by any external organization.

Department Approved

[MDS\\_Assessment\\_Plan.pdf](#)

Assessment Plan:

## Related Programs

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Provide information in related programs offered by other UW System institutions and explain the extent to which the proposed program is distinct and how it overlaps or duplicates those programs.

Looking at the UW System major mania page there is currently only one other MS Data Science program available. This is a collaborative online MS program involving Eau Claire, Green Bay, La Crosse, Oshkosh, Stevens Point, and Superior. The proposed plan is to offer a face-to-face program that will build upon the existing expertise at UW-Madison within CDIS, so there will be ample demand to allow for a financially viable 131 program that does not compete with other programs.

## Commitments

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Courses in the curriculum are numbered 300 or higher.

Yes

The program faculty/staff will ensure the program website, Advance Your Career materials if applicable, and other presentations are consistent with the Guide information for this program.

Yes

Credential will not be awarded retroactively to students who completed all of the requirements before the credential was approved.

Yes

## Supporting Information

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List name and department of those who are in support of this proposal.

Name (Last, First)	Date of contact/support letter received	School,College, or Department	Comment by contact person	On behalf of
Arpaci-Dusseau, Remzi	November 21, 2021	Computer Sciences (COMP SCI)	Support, partner in the program	
Rubel, Alan	November 28, 2021	Information School (I SCHOOL)	Support	
Berridge, Craig	November 5, 2021	Psychology (PSYCH)	Support	
Seppalainen, Timo	December 15, 2021	Mathematics (MATH)	Support	

If those supporting the proposal provided a letter or email of support upload here. A letter is NOT required. Upload any other explanatory information about support from other UW-Madison units.

[mds-cs-fall21.pdf](#)

[mds-iS-Chair 11-28-21.pdf](#)

[mds-Psych-Chair Letter, Stats-CS MDS Program 11-](#)

[2021.pdf](#)[Math\\_DataMS\\_Support\\_2021-12-15.pdf](#)

Additional Information:

## Approvals

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*Department Approval - This proposal has been approved by the faculty at the department/academic unit level. The program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.*

Enter any notes  
about approval  
here:

This proposal was discussed and approved at a number of Statistics department meetings including the original concept of the program and being housed in Statistics (Feb 9, 2021; 20 for, 0 against or abstain), the creation of the Stat core courses (Oct 5, 2021; 18 for, 0 against or abstain), and the final version of the Statistics-taught courses in the curriculum (Nov 2, 2021; 16 for, 0 against or abstain).

Entered by: Sara Rodock  
Date entered: 11/30/2021

*School/College Approval - This proposal has been approved at the school/college level and it is submitted with the Dean's support. The Dean and program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.*

Enter any notes  
about approval  
here:

Entered by and  
date: Date entered:

*GFEC Approval - This proposal has been approved by the Graduate Faculty Executive Committee and the Dean of the Graduate School.*

Enter any notes  
about the approval  
here:

Entered by:

Date entered:

*UAPC Approval - This proposal has been approved by the University Academic Planning Council and the Provost.*

Enter any notes  
about approval  
here:

Entered by:

Date entered:

## For Administrative Use

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Admin Notes:

Guide URL:

SIS effective date:

Guide publish  
date/type:

Tuition start term:

Career:

SIS Program Code:

SIS Short  
Description:

SIS code for  
additional major:

Other plan codes  
associated with this  
program:

Diploma Text:

Diploma Text 2:

Degree:

Field of Study:



Program Length:

National Student

Clearing House

Classification:

Plan Group:

Educational Level:

Award Category:

Enrollment

Category:

CIP Code:

STEMOPT

UWSTEM:

HEALTH:

NSF STEM:

Educational

Innovation

Program:

Distance Education

Program:

Non Traditional

Program:

Special Plan Type:

Added to UW

System Crosswalk:

Scan this proposal:

Upload documents that should  
be scanned:

Reviewer

Comments

**Elaine Klein (emklein) (12/02/21 11:16 am):** This proposal is ready for L&S Curriculum Committee discussion (est. 12/14/2021). RFA is in progress and will be ready in time for L&S APC discussion.

**Elaine Klein (emklein) (12/23/21 9:26 am):** Rollback: Rolling back on request of Assoc Dean Kristin Eschenfelder, to allow dept to incorporate 6 electives from ISYE and may other changes that may relate to them. (Please consult Kristin and or Sara R. for details.) /emk, L&S Academic Planning

**Sara Rodock (rodock) (01/03/22 3:50 pm):** Added 5 of the recently approved I SY E courses to the curriculum at the request of I SY E

**Sara Hagen (skhagen) (01/10/22 1:18 pm):** The College of Engineering will provide feedback on or by February 1, 2022.

Key: 1239