



**A review of recommendations from the *Master's Programs and Enrollment at Duke University: A Status Report***

**Prepared by the Master's Report Implementation Committee**

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## Executive summary

Master's programs (MP) have an important role to play in the academic community at Duke University. MPs serve many purposes for students and disciplines: In some cases, they are the terminal degree in a field or discipline (e.g., Master of Fine Arts in Experimental and Documentary Arts); a necessary or helpful step to a Ph.D. program (e.g., Master of Arts in Economics); a professional credential (e.g., Master of Business Administration); a means to experiment with graduate-level work (e.g., Master of Science in Global Health); or a way for continuing intellectual growth (e.g., Master of Arts in Liberal Studies).

Duke MPs generally fall into two major categories: Research MPs that are administered by The Graduate School, and professional MPs that are overseen by the sponsoring professional schools. At present count, there are approximately 3,750 master's students enrolled at Duke. Compared with 6,626 undergraduates and 4,715 doctoral students, master's students comprise nearly a quarter of the entire student body. As such, master's students are a sizeable and important part of a diverse and vibrant Duke community, and every care should be taken to avoid treating them as a secondary population.

The Master's Report Implementation Committee (further referred to as "Committee") was charged by the Provost to develop a plan to implement the recommendations made in the *Master's Programs and Enrollment at Duke University: A Status Report* (further referred to as "Status Report") prepared by The Graduate School and the Master's Advisory Council (MAC) in the spring of 2015. As we have undertaken our charge, it has become clear that many members of the University Community would like us to prescribe a more definite set of guidelines for MPs at Duke. The Committee has met several times to discuss each of the recommendations outlined in the *Status Report* and to provide suggestions for actions that should be taken to improve the status, operation, and oversight of MPs, as well as to suggest some long-term planning and coordination of offices and organizations that impact these programs.

The *Status Report* identified a number of concerns that prompted their investigation. First, there has been a doubling of the number of master's students at Duke over the past decade with little, if any, centralized oversight or coordination of this growth. Moreover, much of this growth is attributed to increased enrollments of international students, primarily from India and China. A third issue is that not enough is known about the impact of these, or any, MPs on the physical and intellectual resources of the University, nor about how the additional tuition revenue is being spent or reinvested.

The *Status Report* asks for a plan for strategic organization and coordination among MPs and a strategy (perhaps to be outlined in the Provost's Strategic Plan) that would give consistency to the design, delivery, and performance of programs across the University. While there are ways to create a greater measure of uniformity among MPs, there are problems with the amount of coordination that the report recommends since each school controls their own programs. This creates a level of complexity in trying to develop a singular, consistent organization. Nevertheless, the Committee submits the following report that includes certain actions that should be taken to advance the knowledge and ability to develop strategic direction for MPs at Duke. Specifically, the following actions are recommended:

1. There should be annual MP summary reports by schools/colleges on metrics that elucidate the number, quality, matriculation, budget forecasting and costs of programs, together with placement tracking of current master's students and graduates.

2. There should be better tracking of master's student use/access of resources, including, but not limited to, housing, library services, English language support services, parking and transportation, Counseling and Psychological Services (CAPS), Career Services and information technology. The use of these resources by MPs should be accounted for to ensure that master's students and programs are contributing their share to support student services.
3. There needs to be regularized monitoring of MPs to assess those with high/sufficient/low enrollments, carefully and systematically monitor the placement of students in jobs, report on how programs are meeting social needs of their students, and how programs fill intellectual gaps in the curriculum.

In summary, the actions recommended will improve the operation and coordination of MPs at Duke. The larger unresolved issue is what is the right number of MPs and master's students for Duke University. It is clear that this will be a moving target and that there is no fixed formula that will likely address this very non-specific challenge. After much deliberation by the Committee, we feel that determining the appropriate number of MPs should be an ongoing discussion among the University administration and faculty governance units. Monitoring the growth and direction of these programs is essential for Duke to offer MPs at the right price point to address the learning and professional needs of students and society.

## Recommended Actions

There are several central themes/areas detailed in the *Status Report*, including the creation of new MPs, program admission, financial demands on students, resource requirements for the University, student tracking, program review, evaluation, and coordination, and formulating the right balance of MPs.

### Creation of master's programs

Perhaps the best place to begin making changes in the MP environment at Duke is in the creation of new programs. This is where the proposed programs receive critical feedback on their design, implementation, and purpose. We suggest that a more uniform set of requirements and expectations be articulated and put in place that includes:

- **Articulating a vision:** MP proposals should articulate how the new programs contribute to the larger mission of the University, as well as to the more specific missions of the sponsoring academic unit(s). The articulation of this vision should be evaluated by the MAC and Academic Programs Committee (APC) in their review of new programs.
- **Success monitoring:** The criteria for success are different for each MP. Depending on the program, success might be continued high enrollments, the placement of students in jobs or doctoral programs, the meeting of a social need, or the filling of an intellectual gap in the curriculum. Nonetheless, these criteria for success must be identified and justified, with a plan for monitoring and reporting data, starting with a careful articulation of metrics/indicators that define success. The monitoring of success should be evaluated by the Vice Provost for Academic Affairs (VPAA) and APC in their review of existing programs.

- **Evaluations:** We propose that the University require the following elements be addressed as part of new master's proposals, with assessment of follow-through in their subsequent external review if they are approved:
  - A demonstration of the MP's fit with the broader educational activities and mission of the sponsoring host program(s).
  - An assessment of the effects of the program on the broader University. The specifics of these assessments are detailed below.
    - A balanced discussion of the positive and negative effects of the program (including financial) as well as discussion of key risk factors, including resources available (faculty/student ratios, space, classrooms, etc.) and the strain placed on the particular school or department.
  - An analysis of synergies that may exist among the proposed research MP's graduate students and others across the University. For example, are there ways that Ph.D. and master's students in the same school or department can be encouraged to collaborate?
  - Clear articulation of the specific student learning outcomes for the program and the means by which those outcomes are assessed.
  - Sponsoring departments and their parent schools should consider and articulate what the proper student distribution (ratio of undergraduates to master's to doctoral) should be among all their programs.
  - Articulate how the MP is independent from and how it integrates with other programs offered by the academic unit, including, but not limited to, Ph.D. programs.
- **Launching programs:** We note that most MPs tend to be developed as standalone programs that address a need articulated at one point in time. So that promising programs under development do not overlap with programs that have been approved but have yet to begin, programs should field their first class within two years of approval; MPs that do not commence within this period will have their approval withdrawn.
- **Alert student support services:** The additional student load associated with the launch of new MPs can significantly impact the level of support and services provided to all students by our central units (e.g., the Libraries, Parking and Transportation, central technology support). A mechanism for alerting providers of emerging programs and their associated increase in demand should be part of the new MP creation/approval process.

### Admission to programs

Admissions to MPs should conform to the highest academic standards of the department, program, school, and the University in general. Financial considerations should never compromise academic integrity in the admissions process. In admitting a student, there should also be adequate assurance that the student possesses the skills they need to be successful. There is a concern, for instance, that some international students are being admitted without adequate English language skills. Lack of English writing and speaking skills can limit a student's ability to participate in their academic program, to interact with other students, and to develop a level of comfort and acceptance by the Duke and Durham

communities. Students who enter without adequate language skills need to draw on English as a Second Language (ESL) resources and often require more attention by professors and advisors. We recommend:

- **Get to know them:** The University's technological capabilities make it fairly easy to conduct Skype or other forms of online video interviews with students prior to admission. Any student that requires a TOEFL score for consideration for admission should also be subject to a required online interview as part of their admissions review.
- **Once admitted, advise them well:** Programs should demonstrate the capability to provide advising for all master's students; it is especially important for programs that consist of and draw large numbers of international students to help them navigate the support services, academic culture, and local community of Durham.
- **Career development begins when they are accepted:** Career services are critical for the success of master's students. They are on campus for the shortest time of any other student population (compared to undergraduate and doctoral students), and must be prepared and introduced to career possibilities and employment opportunities in a shorter time frame. We suggest that each MP be responsible for either enlisting the Duke University Career Center in meaningful ways or to hire and employ their own career services personnel. The Master's of Engineering Management program in Pratt, for example, has enlisted their own career services personnel to assist in resume development and job searching.

### Financial demands on students

Many master's students personally pay for the tuition and fees associated with their programs. The cost is offset by scholarships that some programs offer students. There is a concern that many students, particularly those in research programs where there are not clear and obvious vocational pathways, are leaving with a high level of debt that does not offer a clear employment benefit. While these research master's degrees may facilitate getting into Ph.D. programs, there is no guarantee and the debt load from these programs does not disappear but rather is deferred till the completion of the next graduate or professional certification. To address these financial issues we suggest the following:

- **Advertise:** Recent placement statistics should be advertised in MP recruitment materials.
- **Advise:** Advise students in research MPs about career options prior to accepting placements in these programs. These conversations should also be part of the mentorship offered to students once they are on campus. There should be clear pathways and expectations as part of the program for achievements that will allow master's graduates to better compete for employment or for acceptance in Ph.D. programs in relevant fields.
- **Incentivize:** To help provide a diverse and talented student population for our MPs, the University, particularly The Graduate School who oversees the research MPs, needs to pursue additional funding for scholarships and financial aid and to work with individual programs to secure more research and teaching opportunities.

### Resource demands

Accounting for the resources master's students utilize on campus once they enroll in a program is one of the most challenging issues identified by the *Status Report*. There are two dimensions to the problem: The unknown costs of central services that assist MPs and how these students affect University-wide

operations because they drain resources. The revenue that comes to The Graduate School and to the professional schools ends up on the credits side of the accounting ledger. But the costs (debits) that are associated with many programs and their students are less accurately enumerated. This is partly because some MPs don't track the costs of central services provided to students and partly because operational accounting of these programs is not treated as a "business." These problems are fairly ubiquitous to MPs, but the Committee recommends that there be greater transparency and accuracy in establishing the real costs of the students to centrally provided support services. Regular analysis by the Office of the Executive Vice Provost for Finance and Administration can help optimize the services provided, as well as inform staffing decisions and the appropriate student fee model. To this end, we suggest:

- **Share the information:** MP budget directors and financial analysts should regularly share information about accounting approaches and best practices at the program/school/management center levels.
- **Utilization of support services:** Without data or tools to track the physical and intellectual resource demands that master's students place on central support services, MPs are unaware of the impact their students have on University resources. The University needs a better awareness of where, how, and by whom resources are consumed and a better understanding of the delivery and consumption of student-related services by MPs across campus.
  - Most of these data are likely being passively collected currently, and could be collected at point-of-use with little additional work/cost. Service centers such as the Libraries, the OIT Help Desk, Career Center, Parking and Transportation, and CAPS collect student usage data as part of their current business processes, but is left largely unreported to the consuming programs/departments.
    - With some additional data scrubbing (including anonymization) and analysis, reports detailing usage from different student populations could be provided to MPs to help them better understand their impact/strain on the central service units. Usage data could also help determine service unit budgeting and any potential financial responsibility of the MPs. Institutional Research (IR) could be a resource to assist in the compilation of usage reports.
  - Another mechanism of tracking could involve asking master's students, through surveys, interviews or focus groups, about the University services they use and how they perceive the value of those services. Survey information can be built into year-end assessments and service providers and/or The Graduate School could convene focus groups.
- **Shared academic resources:** Another issue of broad concern is with students taking courses outside their program. For instance, some MPs have statistics requirements but offer no statistics courses. Students are then forced to find these courses in other departments or schools, which transfers both burdens and costs without reimbursement. The Committee's recommendation is that MPs compensate other units for courses they require but don't offer—the funding should follow the students. These arrangements should be noted in the creation of new programs as well as in the review of existing programs.

## Tracking of students

Outcomes tracking of master's students post-graduation is inconsistent from program to program, and no tracking is done at the institutional level. There is perhaps no greater need for the tracking of master's students than in the arena of career services and job placement. In many cases, master's students need external and professional contacts in order to help connect them to future employers or follow-on graduate programs, and MP alumni can be a rich source of connections. Moreover, MPs cannot effectively communicate to prospective students the value of the Duke experience for future job/educational opportunities, or the success of past graduates, without data or a system to track alumni placement and career progress. To address these issues, we suggest the following:

- **Data, data, data:** We recommend that a rigorous placement data collection method and data management system be developed by the Provost in conjunction with The Graduate School for use by each MP to accurately track the employment or other future career outcomes of its graduates. Reporting of these data should be made available on the MP's website for potential students.
- **Surveying:** IR has offered to help produce surveys to assess students while they are on campus and after they have graduated.
  - An exit survey for all master's students with customizable options for school and discipline-specific questions should be created. Such a survey would yield more precise information than current survey tools. This survey should be conducted yearly and include a process for searching for missing students. We also suggest coordinating with Alumni Affairs to help better connect Duke to MP graduates.

## Evaluation/review of programs

All academic programs should be externally reviewed on a periodic basis, including new MPs.

- **Short term review:** The committee supports the protocol established in fall 2013 by former Provost Peter Lange for new MPs, including those offered at Duke-Kunshan University (DKU). This protocol required that all new MPs be externally reviewed shortly after the end of their third year of operation. To implement the short term reviews of MPs, we suggest the following:
  - Specific guidelines and criteria should be established for these third-year reviews, consistent with the criteria for their approval (see *Creation of master's programs* section in "Evaluations" above). The general plan of these reviews would follow the abbreviated external review format already established for free-standing reviews of MPs, with a two- or three-member external review team. A standardized set of materials will be prepared for the reviewers, consistent with the principles articulated earlier in regard to the creation of new programs. The review report would be considered by the sponsoring school, the MAC and APC, and the VPAA. The results would be used to determine collectively whether changes should be made to the MP, including the possibility that it be sunsetted.
  - After the initial third-year review, the review of MPs would follow standard timetables for external departmental reviews. Some MPs are reviewed periodically as part of professional accreditation renewal, such as those in Fuqua. Such programs should include the review by an external accreditor in Duke's eight-year external review. The external review of academic departments and programs is generally coordinated by The

Graduate School following a standard protocol. MPs that are not reviewed as part of such larger external reviews should be subject to a standardized review organized by the sponsoring school in response to a request from the Provost and reviewed by the VPAA, MAC, and APC.

- The value of brief, standardized annual reports from each MP detailing the overall health (application rates, enrollment, graduation rates, finances, etc.) with trending should be considered. Reports could be prepared by the MPs with data assistance from IR and/or The Graduate School. The VPAA could be responsible for reviewing the reports and initiating any appropriate action in partnership with MAC, APC, and The Graduate School.
- **Review format:** We suggest that the external review committees for standard, cyclical reviews of larger academic units be given special instruction on the review of MPs that are part of such units. The review of established programs is done on an approximately eight-year cycle. Much happens in the life of academic programs over that period. Though the MP may be only a small part of the overall operations of an academic unit, there may be broad personnel and/or financial implications to the continuation of the program for the unit overall.
  - We suggest that the standard external review format be altered, with reviews separately highlighting the various academic degree programs offered by a unit. Unlike most past external evaluations, which considered all graduate programs together, a department's/unit's Ph.D. program(s) and MPs, as well as its undergraduate program/offering, should each have their own separate evaluations as part of the larger report. In each review, a specific section should focus and report on MPs, programmatic infrastructure and support, and student services. These evaluations should include metrics for review that include, but are not limited to, number and type of faculty contacts with students, number of student contact hours, number of staff who provide services, and the nature of the advising and student services provided. It should also include number of applications to the program, time to degree, number of graduates, and placement statistics.
- **Sunsetting of MPs:** Master's degree demand and enrollments can be particularly sensitive to issues and events beyond the walls of Duke. For example, the financial crisis has driven interest in financially oriented master's degrees. In addition to external forces, changes in faculty, student interest and the strategic direction for schools can render some MPs ineffective or undersubscribed. Due to these reasons and others, some MPs should be discontinued or phased out. This can occur as a part of three different processes:
  - At the time of a sponsoring department's or unit's regular external review, a program may be determined to be underperforming or no longer a worthwhile endeavor for the larger unit. In this case, the VPAA, ECGF, MAC and/or APC reviews might suggest a program be phased out. Upon this recommendation, the Provost, VPAA, school dean, department chair and program heads will meet to confirm that the program should be discontinued or suspended. They will establish a timeline for phasing out the degree program, with current students grandfathered through their timely graduation.

- During the external review of new MPs conducted shortly after their third year of operation, the process leads to a conclusion that the program is underperforming and does not merit intervening to correct problems. Criteria for such a conclusion might include a lack of faculty resources or interest, less than 50% of the original projected student enrollment, poor graduation rates, poor placement of graduates, not meeting proposed expectations, financial shortfalls, etc. The process described above would be used to phase out the active operation of the MP.
- It is also possible that the program faculty will themselves decide that the MP is not worth the effort or expense to continue. In this case, after confirmation by vote of the sponsoring unit's faculty, the program head should communicate in writing to the dean of the school and to the Provost the intention to phase out or suspend the degree program.

### Coordination of master's programs

While it is important for MPs to maintain their individuality, there are a number of coordinated measures that should be undertaken to enhance master's programmatic quality and the management of University resources.

- The MAC is a provostial advisory committee with rotating co-chairs that is composed of faculty and administrators from all schools, the Library, Student Affairs, and other units of the University. We recommend a central role for the MAC in providing coordination and oversight of MPs in partnership with the Office of the Vice Provost for Academic Affairs and The Graduate School.
- We suggest that the MAC provide a thorough review of all new MP proposals, assessing resource issues and implications. This is an important complement to the reviews conducted by ECGF and other school-based faculty committees, which focus on academic issues. MAC would write a resolution on the new proposal that would become part of the proposal documentation to be considered by the Provost, deans, and APC.
- We suggest that the MAC consider all external reviews of existing MPs, whether the initial review or an ongoing review of a program.
- We further suggest that MAC, with the technical assistance of IR, be charged to collect and monitor service resource usage data that relate to master's students, including usage data from CAPS, International House, English for International Students, and other units that provide services or programming to master's students in multiple schools. This may involve requesting data, convening meetings, and/or conducting interviews of service program directors as needed for the committee to gain a broad understanding.
- We suggest that the MAC review placement data for the MPs of each school. MAC should also request an annual statement from each school on the financial viability and costs of each MP, as well as how the MPs of a given school contribute to its educational and research missions. MAC, in turn, should produce an annual report covering all MPs summarizing these outcomes, to be considered by APC and the Provost.

## Perspectives and conclusions

Master's degree programs provide an opportunity to acquire specialized skills and knowledge necessary for career advancement and success. Master's degrees are becoming an accepted minimal educational credential for many positions. Duke's MPs have provided this critical training to many students, but their success and the MPs' impact on the university have been less clear. This report addresses a number of the issues facing the university, schools, and programs in our pursuit of providing excellent experiences for students pursuing master's level training.

Even with the recommendations and action items discussed in this document, there are remaining unresolved challenges for MPs. For example, housing is a big issue that faces master's students. Availability of proximal, affordable housing may become increasingly problematic in the near future due to rising costs in the Durham market. Therefore, we suggest that Duke Student Affairs, The Graduate School, and the Vice President for Facilities should meet and develop a five- or ten-year plan to assess the need for graduate students housing.

The challenge not completely resolved by the recommendations of this report concerns the establishment of limits on the number of MPs or master's students at Duke in order to "right size" the ratio of master's students in the greater population. While we were not able to address this issue, we have provided mechanisms for maintaining a healthy population of MPs through the use of regular evaluation, appropriate metrics, and ability to renew and refresh the MPs that exist at Duke.

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## Appendix

### Guidelines for Third-Year and Eight-Year Evaluation of Master's Programs

*Note: Units are asked to provide information in the following broad categories. The questions below each category are meant to serve more as guidelines for responses, rather than a rigid list to be answered in sequence.*

#### **A. General description of master's program(s) (intellectual foundations, program goals and student learning objectives)**

1. What degree options do you offer master's students in your department? If you have multiple options, explain the rationale.
2. What are your educational goals and learning objectives for the students in your master's program?
3. In what ways does your program relate to Duke's strategic plan, and to the general educational mission of your unit, your school, and the University?

#### **B. Curriculum**

1. How was the curriculum for your master's program developed? What are the principles underlying the curriculum? How has your unit kept informed about and responded to national curricular trends in the field?
2. Has the curriculum changed substantially in recent years, or is your unit considering any changes? How and why?
3. What is the progression and sequence of courses and other requirements (e.g., research, internships) through the master's program? Are there serious gaps in the course offerings or in opportunities for research or internships? What resources would be needed to fill them?
4. Are courses offered on a regular and/or rotating basis? What is the relationship of these courses to other courses offered by your unit at the undergraduate and/or Ph.D. level? Do students have any difficulties fulfilling the requirements for the master's degree?
5. What is the relationship of your master's program and curriculum to other those offered by other departments or units? Do other departments offer courses that are required or taken as electives by students in your master's program? If so, are they adequate for your students? What agreements or procedures are in place to ensure continuity of course offerings when other departments are involved, as well to ensure access to those courses for your students? How do you make it worth the while for these units to include your students in their courses?
6. How do you articulate your program goals and curriculum requirements to your students (written materials/websites /advising, etc.)?

#### **C. Co-curricular connections**

1. How are master's integrated into the intellectual life of your unit?
2. To what extent do your students participate in research projects, outreach programs, internships, etc.

#### **D. Connection between master's program and undergraduate and doctoral programs**

1. To what extent does your unit attempt to integrate your master's program with undergraduate and doctoral programs, whether in your own unit or others?
2. How does your master's program impact undergraduate and/or and doctoral programs offered by your unit or by other units? Describe both positive and negative impacts. How and to what extent are master's students involved in the teaching and/or mentoring of undergraduates (including common research projects or other learning experiences)?

#### **E. Instructional faculty/teaching**

1. How is the teaching load for your master's program staffed? To what extent are courses taught by regular rank, tenure-track faculty or by others, and what sort of appointments do these others have?
2. Is your program limited by inadequate faculty resources? In what ways?

#### **F. Enrollment trends, recruitment and retention of students**

1. What do enrollment and attrition rates indicate about the effectiveness of your master's programs?
2. How does the department attract students to the master's program?
3. What is the mix of domestic and international students in your program, and how does that impact the program and resources required?
4. Are international students screened for a fit to the program, and if so how? Are they made aware of any English language proficiency requirements, for example that would be required for obtaining an internship?

#### **G. Resource requirements and utilization**

1. What types of resources within the university and outside the direct control of your unit do your master's students utilize?
2. To what extent do international students in your program use ESL instruction?
3. What sort of career placement services do your master's students use? Are these services provided and funded by your program, and/or do they use the Career Services offered through the Office of Student Affairs?

#### **H. Assessment**

1. To what extent and how frequently are the courses and curriculum for your master's program reviewed? How and on what basis are decisions made to add, drop, and modify courses or other requirements of the curriculum?
2. How does your unit evaluate program effectiveness/ student learning outcomes? What assessment instruments are used?
3. How does assessment feed back into program?

#### **I. Data to accompany self-study**

- Number of enrollments per year over last 10 years
- Number of students completing the various master's degrees offered
- Placement/Post-degree positions of graduates

- Admissions metrics and indicators of incoming student quality
- Assessment plan for student learning outcomes
- Most recent annual assessment report

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