AGENDA

NORTH DAKOTA STATE BOARD OF PHARMACY JANUARY 6-7-8, 2009

TUESDAY – JANUARY 6, 2009 - CANDLEWOOD SUITES

1831 NDSU Research Park Drive - Fargo ND 58102 (1 –701-235-8200)

5:00 PM CALL TO ORDER – President Gary W. Dewhirst, R.Ph.

FIRST BUSINESS SESSION

Review and approval of agenda 1.

AGENDA TAB

2. Review and approval of Minutes of : **MINUTE TAB**

October 30th, 2008 3. Grant Lifetime Licenses and Sign certificates = 8

TAB 1

Sign RPh Original Licenses Sign RPhTech Original Licenses

CE Credit request – Renae Fjeldheim, PharmD License #5124 4.

6:30 PM-Dinner- Lone Star Steakhouse - 4328 13th Ave SW - 701-282-6642

Wanda Roden and Rebecca Focken- Experiential Program NDSU - preceptors Ken Strandberg and Barbra Lacher - NDSCS

Technician Advisory Committee:

NAPT President: Jodi Hart jhart@primecare.org

Vice-President Angela Buchanan abuchanan@csmOnDemand.com

Past-President Brittany Muchow britrcough@yahoo.com

- 1.) NAPT and the NDPhA academy structure
- 2.) Registered Pharm Tech on the Board of Pharmacy

Discussion Items: Managing the Techs on the Job in either the online or module programs; Technician ratios and enforcement of them; Are Interns included? Transition to an ASHP Only standard for registration

WEDNESDAY - JANUARY 7, 2009

7:30 AM Working Breakfast -

For the Record: Sale of Neumann Drug in Cando from Roger Narveson to Steve McAtee and Carolyn Counts, PharmD

Kristen Bonness - PharmD Student Dropped Out; Tech-In-Training expired did not complete; Wants back into the PharmD Program (?) requested intern license that will expire February 1st, 2009 – Renew her or not ??

9:00 AM Techs in Hospital Telepharmacies-Shelly Johnsen, RPh comments TAB 2 Remodeling/Relocating: Pharmacare Inc-Fargo 10:00 AM

[new DBA InHealth Specialty Pharmacy]

Review Case of - Terry L. Anderson was ND #3570 [revoked 2000]

12:00 NOON - Lunch

Presentation by Dennis Tribble, PharmD [Telepharmacy] 2:00 PM

2009 Legislation:

TAB 3

Guide from Mark Hardy NDPhA Governmental Affairs Committee Ownership changes for hospital pharmacies Bill # Clarification of CE Requirements for Pharmacists HB #1091 Oral Transmission for Dental Hygienists & Assistants HB #1091 Separate the Association & Expand Board – renewal fee SB# 2039 Requirements for dispensing Controlled Substances [Internet] Rescheduling to match DEA -HB # 1105

6:30 PM Dinner–Willow Room–Radisson Hotel – 201 N 5th St – Fargo 232-7363 Invited Guests: Dean Peterson – President Joe Chapman- Provost Craig Schnell – Michael Schwab, NDPhA Executive VP - Lance Mohl, President, ND Pharmacists Association William J. Grosz, ScD, R.Ph, Judy Swisher, R.Ph. and Jerry Johnson, R.Ph..

Discussion Items: Working together in the education of pharmacists and multi-disciplinary teams of healthcare providers; discover synergies we can develop between the Board and the College of Pharmacy, Nursing and Allied Sciences

Hear about the plans for the future of NDSU and the College of Pharmacy, Nursing and Allied Sciences; Hear about progress toward the new accreditation standards adopted for the last ACPE visit; Explore opportunities for Preceptor training and inspector input into the accreditation and pharmacy practice experience.

Review and Approval of paid invoices **Board Member Reports** Approval of all legal action of the Executive Director

Year to date Financial Report - Budget comparisons **Auditor's Report** - Depositories

BUDGET TAB

Update on ND Prescription Drug Monitoring Program

(NDPDMP)

TAB 4

Preparations for May 20-21-22-23, 2009 Exams

TAB 5

THURSDAY - January 8, 2009

8:00 AM Breakfast

New Business

9:00 AM Jessica Havelka Schutt – May 2004 NDSU Graduate

9:15 AM Partnership to Corp transformation & grandfathering [Altru] TAB 6

9:45 AM Larry Kroshus Request for Reciprocity off of license by Transfer **TAB 7**

10:30 AM Terry L. Anderson was ND #3570 request for re-instatement

Review Active Cases: Ryan P Sannes ND RPh. #4917 10:45 AM

11:30 AM Robert P Brower – Reciprocity Candidate [denied November 2008]

Noon -

Vouchers - Adjourn

President Gary Dewhirst called the Meeting to order at 5:00 PM on Tuesday, January 6th, 2009 in the Board Room of the Candlewood Suites in Fargo, North Dakota. Present were: Rick L. Detwiller, R.Ph. - Gary W. Dewhirst, R.Ph. -Laurel Haroldson, R.Ph. - Bonnie J. Thom, R.Ph. - Gayle D. Ziegler, R.Ph., as well as Executive Director Howard C. Anderson, Jr., R.Ph. and Curtis A. Larson, R.Ph., CVS District Manager.

It was moved by Pharmacist Thom and seconded by Pharmacist Ziegler to approve the Agenda as printed. All Board Members voted ave - the motion carried.

It was moved by Pharmacist Detwiller and seconded by Pharmacist Haroldson to approve the minutes of October 30th, 2008 as printed. All Board Members voted aye - the motion carried.

It was moved by Pharmacist Haroldson and seconded by Pharmacist Thom to grant Lifetime Certificates to: Originally issued on June 25, 1958

2404 Ronald M Rogers, R.Ph. 8888 Hunter's Bay Road Alexandria MN 56308-6211 2413 Patricia M. Churchill, R.Ph. 103 West Ave B Bismarck ND 58501

2419 Richard E McElmury, R.Ph. 801 1st Street NW Bowman ND 58623-4466

2422 Mary Ann Pfeiffer, R.Ph. Pfeiffer Pharmacy Box 367 Pequot Lakes MN 56472-0367

Originally issued on November 14th, 1958

2430 Loretta Aipperspach, R.Ph. 1344 2nd Street SE Jamestown ND 58401-3715 2435 Jerome F. Dufault, R.Ph. 602 N Victoria Rd #M166 Donna TX 78537-9747

2442 James W Parkin DDS, R.Ph. 103 41st Street NE Bradenton FL 34208

2443 Kenneth J. Ryan, R.Ph. 3162 Sterlingshire Drive Las Vegas NV 89146-6225

All Board Members voted aye - the motion carried.

Board members signed Original Certificates for Pharmacists and Registered Pharmacy Technicians.

It was moved by Pharmacist Detwiller and seconded by Pharmacist Thom to grant Renae Fjeldheim, PharmD, ND License #5124 credit for Continuing Medical Education she attended. She will be granted 1.5 Hours Continuing Education Credit for "Commonly Administered Vaccines and Associated Illnesses" and 1 hour CE for "Preventing Herpes Zoster and Postherpetic Neuralgia: Are your Patients Adequately Protected" - a total of 2.5 CE Hours. All Board Members voted aye - the motion carried.

President Dewhirst appointed Board Members Gayle Ziegler, R.Ph. and Laurel Haroldson, R.Ph., with the assistance of Pharmacists Detwiller and Thom to review the paid invoices since the May Board Meeting.

At 6:30 PM the Board of Pharmacy met at the Lone Star Steakhouse for a working dinner with the Technician Advisory Committee made up of NAPT President Jodi Hart; Vice-President Angela Buchanan and Past-President Brittany Muchow, along with Pharmacist Ken Strandberg, Director of the Technician Program at NDSCS; Assistant Director Barbara Lacher could not be present due to a family illness. Also in attendance at the meeting was Wanda Roden, R.Ph. and Rebecca Focken, PharmD in charge of the Advance Pharmacy Practice Experience and Introductory Pharmacy Practice Experience Program at NDSU, respectively.

NAPT President Jodi Hart reported for the Pharmacy Technicians on their successful fall conference in Fargo and indicated that the 2009 Fall conference is planned for Devils Lake, North Dakota.

Technician Hart reiterated that a Pharmacy Technician mentor is very helpful when a Technician-In-Training is working through the on-the-job training program, either with the modules or the online program. Time during work hours to study the modules is very important when a Technician-In-Training works full-time, has a full life, a family at home and multiple distractions once away from the work place.

The Technicians indicated that they recognized no problems with the technician ratios in the pharmacies where they had experience. The Board has asked our compliance officers during inspections to review operations in our pharmacies to be sure that we are not disadvantaging patients by leaving a pharmacist with too many technicians to supervise. Technicians and Technicians-In-Training are both included in the three-to-one [Techs to RPhs] in community practice and four-to-one in a closed door or hospital practice, as the work environment dictates.

Those present generally felt that the transition to the ASHP only standard for registration should be continued. Pharmacist Strandberg pointed out that he felt some recognition of the certification examination by the Board of Pharmacy of the PTCB or the ExCept Examination, should be written into the rules. Even though we have a higher standard with the ASHP Program requirement, other states still wonder why we do not require certification. The Board of Pharmacy could also use the continued certification as an audit for the continuing education as the requirement is the same 10 hours per year, as the Board requirement. The technicians suggested and Pharmacist Strandberg liked the idea of an orientation video for Technicians-In-Training entering the module or online program, to get them off on the right foot. The Board of Pharmacy indicated they might be willing to help with funding such an effort.

The officers of the Northland Association of Pharmacy Technicians [NAPT] offered to survey their technicians to determine how many of them were certified, what

Certification they held and whether or not they were maintaining their certification once they had passed the test upon graduating from a technician program. Executive Director Anderson asked that the survey questions be reviewed by himself or Board Member Ziegler before it is sent out, to be sure that we get the information that we need.

Rebecca Focken, PharmD outlined the NDSU College of Pharmacy plans for implementing the ACPE requirement for Introductory Pharmacy Practice Experience [IPPE] in the P1, P2 and P3 years. The College does have the rotation sites all lined up and are ready to begin compliance with this accreditation standard.

Wanda Roden, R.Ph. discussed the preceptor manual with the Board of Pharmacy, indicating that they were hoping to put the manual online <u>only</u>. However, at the suggestion of some of the Board Members, Pharmacist Roden accepted that some pharmacists/pharmacies may not have ready access to the internet and might choose to have a hard copy of the manual on hand for reference. Problems with the College of Pharmacy access to the RMS System, also gives some preceptors pause. A video or DVD for preceptor orientation was discussed. Pharmacist Roden felt that a required training program should be in place for preceptors, where they would need to attend one of two sessions each year, or complete an online training program. A preceptor recognition certificate was suggested and it was agreed that this certificate of a trained preceptor should be issued by the Board of Pharmacy once the required training has been completed. Board Members pointed out that we do have money in the budget for the training of preceptors and all that is necessary would be for NDSU to bill the Board of Pharmacy when they conduct the preceptor training sessions.

All went away from the dinner indicating that it had been a very productive meeting, with the only negative being the absence of Assistant Program Director Barbara Lacher and the medical problems her family member was having.

The Board reconvened for a working breakfast at 7:30 AM in the Board Room of the Candlewood Suites. Pharmacist Curtis Larson was in attendance along with the Board Members and Executive Director Anderson.

It was moved by Pharmacist Detwiller and seconded by Pharmacist Thom to confirm the round robin action approving the sale of Neumann Drug in Cando from Pharmacist Roger Narveson to a corporation owned by Pharmacist Steve McAtee and Carloyn Counts, PharmD. The pharmacy will be operated as a Telepharmacy with Rolla Drug as the central site. All Board Members voted aye - the motion carried.

The situation with Kristen Bonness was reviewed. We are currently in need of confirmation of the status of Ms. Bonness before any action can be taken on the renewal of her internship license.

At 9:00 AM Shelley Johnsen, R.Ph. arrived at the meeting to discuss pharmacy technicians in Hospital Telepharmacies, relative to our hospital telepharmacy project. Pharmacist Johnsen is the Director of the Hospital Telepharmacy Project and is administering the project and the grant received by the Catholic Health Initiatives. Extensive discussion followed about the plans to begin the project with Jamestown Hospital Pharmacy by March 1st 2009, then adding the Lisbon Hospital Pharmacy by May 1st and quickly extending to seven other hospital pharmacies, the order of which has yet to be determined. Pharmacist Johnsen was very excited about the Board Members indicating that the 24/7 services were badly needed and some overtures having already been received from some 24/7 hospital pharmacies who needed additional help during the daytime and wished to utilize the remote order enter and verification services, as well as the other services of the hospital telepharmacy project. Pharmacist Johnsen was invited back at 2:00 PM to attend a presentation by Dennis Tribble on their telepharmacy system instituted for the supervision of IV preparations.

At 10:00 AM Heather Novak, PharmD and her husband Seth arrived at the meeting to discuss the remodeling and relocation of Pharmacare Inc in Fargo and a new business name of InHealth Specialty Pharmacy.

It was moved by Pharmacist Thom and seconded by Pharmacist Ziegler to approved the submitted floor plans for the remodeling / relocation from Pharmacare In at 3240 15th Street S to InHealth Specialty Pharmacy at 2345 25th Street S in Fargo. All Board Members voted aye - the motion carried.

The case of Terry L. Anderson ND License #3570 which was revoked in the year 2000 was reviewed in preparation for a meeting with him tomorrow morning.

At 2:00 PM the Board of Pharmacy heard a presentation by Dennis Tribble, PharmD representing IntelliFlow Rx an IV Room workflow manager. Shelley Johnsen, R.Ph. was also present for this presentation. After his presentation and many questions, the Board agreed that Hospital Pharmacists could certainly use this manager as a tool in their pharmacy operations. Pharmacist Tribble indicated that they were working on other telepharmacy applications for their company and Board Members explained how the requirements worked for telepharmacy in North Dakota, for remote order entry verification and supervision of the pharmacy technicians from different sites. All were in agreement that the Pharmacist would need to be licensed were the patient resides.

Board members reviewed the ND Pharmacist Association Governmental Affairs Committee summary prepared by Chair, Mark Hardy, PharmD and House Bill #1091 relative to the clarification of CE Requirements and House Bill #1105 Controlled Substances Scheduling and Rescheduling, as well as Senate Bill 2039 concerning Board Appointments and Association Membership that were introduced by the Board of Pharmacy.

There was discussion around the potential for Pharmacy Ownership changes being introduced in the Legislature. Two of our Board Members discussed some concerns about the continuum of care with hospitals and their clinics, however felt that past and recurrent drafts of bills we are seeing were too broad and risked the pharmacy ownership statute inordinately, which Board Members felt has been a good service to the citizens of North Dakota, keeping the Pharmacy Ownership in the hands of pharmacists, who control the pharmacy operations.

It was moved by Pharmacist Haroldson and seconded by Pharmacist Thom to approve all the paid invoices since the May Meeting, except for those relating to check numbers 3426, 3467, 3508, 3546 and 3593 to resolve discrepancies between the attached memo and the actual check amount. On a vote by roll call: Rick L. Detwiller, R.Ph.—aye Gary W. Dewhirst, R.Ph—aye Laurel Haroldson, R.Ph—aye Bonnie J. Thom, R.Ph—aye Gayle D. Ziegler, R.Ph.—aye - the motion carried.

It was moved by Pharmacist Ziegler and seconded by Pharmacist Detwiller to remove from the depreciation schedule all items which we no longer have in the office and which are fully depreciated. On vote by rol I call: Rick L. Detwiller, R.Ph.—aye Gary W. Dewhirst, R.Ph—aye Laurel Haroldson, R.Ph—aye Bonnie J. Thom, R.Ph—aye Gayle D. Ziegler, R.Ph.—aye - the motion carried.

Board Member Reports: Pharmacist Detwiller had an example of a note to a technician that he felt was not professional. Executive Director Anderson indicated that we would work harder to treat all responses that come out of the office in a professional manner. Pharmacist Dewhirst reported on the visit that he and Executive Director Anderson took to the Three Affiliated Tribes telepharmacy sites and their successful implementation of telepharmacy.

It was moved by Pharmacist Detwiller and seconded by Pharmacist Ziegler to approve all legal actions of the Executive Director since the last such motion. All Board Members voted aye - the motion carried.

Year-to-date financial reports were reviewed. Executive Director Anderson reported that some budget items were over budget in both the income and expense categories because additional expenditures authorized by motions had not included a revision or adjustment to the budget, which should be done in the future. \$100,000 CDs have been placed in Bank Forward in Cooperstown and The Bank of Turtle Lake to diversify our funding into smaller North Dakota Banks, while staying under the FDIC limit in our primary depository institution.

Board Members reviewed the update on the Prescription Drug Monitoring Program [PDMP]. Executive Director Anderson pointed out that since online access has been granted to pharmacists and physicians the percent of requests from pharmacists

has increased substantially over what is generally reported in the national averages for PDMPs. Board Members expressed that this is an excellent program and were apprised that after April 2009, Board funds would be expended to fund this program. An additional revenue source will eventually need to be sought for the continuation of this program.

The Board moved to the Willow Room of the Radisson Hotel for a 6:30 PM working dinner with NDSU Dean Charles Peterson and Provost Craig Schnell; Compliance Officer Judy Swisher and Board Attorney David Lindell in attendance.

Dean Peterson talked about ongoing work to collaborate between the Allied Health Sciences in the Education of Pharmacists, Nurses and other health professions. In response to a question from Board Member Gayle Ziegler, we talked about the Concept Pharmacy getting a billing number for medication therapy management and also doing immunizations for the NDSU athletic department. The Dean pointed out that progress is being made toward filling faculty positions identified by the College and recognized as needed by the Accreditation Team during the last ACPE Accreditation visit. NDSU has, of course, adopted the ACPE 2007 Accreditation Standards and is making good progress toward the introduction of the IPPE for our P1-P2 and P3 PharmD Students.

Dean Peterson talked about the Masters of Public Health Program, and a copy of the current updated White Paper is included for reference as Addendum 1. This program is being worked in a cooperative manner through the North Dakota Board of Higher Education and it is hoped that the University of North Dakota will come on board as a partner in the process.

Dean Peterson talked about the program for Vaccinology and other initiatives being introduced through the Research and Technology Park and the Centers for Excellence Program with the North Dakota Legislature and the Board of Higher Education.

Dr. Schnell discussed long-term plans for the University and the College of Pharmacy, indicating that several options were on the table to provide additional space for the College of Pharmacy and current reviews are looking at whether a new building should be constructed or an existing building be remodeled to suite the needs of the College in the future.

Both Dr. Schnell and Dean Peterson thanked the Board of Pharmacy for the close working relationship and the willingness to review projects and proposals as well carry them into the future. Dr. Bill Grosz was mentioned, who had been invited although he could not attend tonight's dinner because of the weather, for his forward looking perspective about pharmacists being involved in public health for the benefit of the communities they serve.

On Thursday – January 8, 2009 the Board met at 8:00 AM for a working breakfast. In addition to the Board Members and Executive Director Anderson, there were:

Board Attorney David Lindell and Compliance Officer Judy Swisher and Curtis A. Larson, R.Ph, CVS District Manager.

At 9:00 AM Jessica Havelka Schutt, NDSU PharmD graduate in May 2004 arrived at the meeting to discuss her situation, in compliance with the extension of her Internship Licensure to allow her to retake the NAPLEX Examination. Jessica indicated that she had not followed all of the recommendations that the Board of Pharmacy had given her in the past and was unsuccessful arranging something with NDSU. She had attended a NAPLEX review course in Chicago for four days. She indicated that she was signed up and anticipating re-taking the NAPLEX Examination soon. The Board Members wishes her good luck on the examination.

The Board reviewed the Legislation allowing the conversion of a partnership to a corporate type entity and were apprised by Executive Director Anderson that Altru Health Systems had inquired about utilization this to convert and assume the grandfathering benefits of the Grand Forks Clinic Pharmacy. As these discussions had occurred just recently, no specifics have been received. These discussions were with Attorney Lindell and Executive Director Anderson with someone inquiring on behalf of Altru.

An Application from Larry Kroshus for Reciprocity based on a license he received by transfer from another state was reviewed. Pharmacist Kroshus no longer holds a license received by examination.

It was moved by Pharmacist Detwiller and seconded by Pharmacist Haroldson to continue the Board's current policy of requiring that reciprocity be off a license which had been received by examination in another state. All Board Members voted aye - the motion carried.

At 10:30 AM Terry L. Anderson arrived to discuss with the Board a request for reinstatement of his North Dakota Pharmacist License #3570.

Board Members asked Terry Anderson to review his history for them since his graduation in 1976. Terry indicated that in March of 1976 he began working for Super X in Marion, Ohio. He explained an interesting mentoring scenario, where the negative aspects of mentoring were brought out. He observed a pharmacist in the Super X store filling out extra insurance forms and indicating to Terry that this was to make up for the losses in the low reimbursement rates and other areas of loss in the store. Terry indicated that he observed two other pharmacists in the same store doing the same thing. Although he did not participate in this, it was an example of something that did happen in his life later on. In 1978 he moved to Arizona, working for Super X. In 1988 he went to work for Pay & Save in Hawaii. He indicated that he was living with a lady at the time, which went bad. In 1992 he moved back to South Dakota and went into business with his brother.

On questioning by the Board, he did not remember any financial problems or unpaid bills in Arizona; although Board Attorney Lindell had notes from a meeting

with his attorney where he had indicated that he may have to seek bankruptcy in Arizona to resolve some of his financial issues.

A businessman financed the business in South Dakota and then later financed the move to Jamestown, North Dakota. Terry began to have financial problems and was overcome by debt. In September 1997 the FBI came in and copied his records. In 1998 he met with a Judge, pled guilty and was convicted. Terry subsequently had the case before the Board of Pharmacy and then moved to Lubbock, Texas.

Terry stated that he quit drinking in 1999 and although drinking was never an addiction he tended to make some foolish mistakes when drinking.

It was moved by Pharmacist Ziegler and seconded by Pharmacist Thom to set the following requirements for the possible reinstatement of Terry L. Anderson's Pharmacist License #3570:

- He must complete 1500 Hours of Internship, divided into at least three 500 hour portions with different preceptors. He will have a maximum of three years to accomplish this requirement once he decides to begin his internship.
- That monthly reports from the preceptors and from Terry L. Anderson be filed during his internship period.
- That he disclose his prior Findings of Fact, Conclusions of Law and Order with the Board of Pharmacy to all prospective preceptors and employers.
- That he retake and pass the NABPLEX Examination.
- That he retake and pass the MPJE Examination.
- That he pay North Dakota State Board of Pharmacy's restitution of \$2,976.82 and a reasonable compounded interest rate of 5% per year on this unpaid restitution amount.
- That he pay all back Active license fees during the interim period between his revocation and his reinstatement date, before licensure can occur.
- That he not serve as a Pharmacist-In-Charge during a probation period after licensure.
- That he show reasonable progress on his Federal restitution and provide documentation demonstrating the payments made.
- That he submit to a background check to begin his licensure as an intern and again before the re-instatement becomes official and that he be responsible for paying all costs of these background checks.

All Board Members voted aye - the motion carried.

The Board Members reviewed the case of Ryan P Sannes ND Pharmacist #4917. Executive Director Anderson reported that no progress had been made by Ryan in obtaining employment.

The Board members then asked about Kyle Schwandt and Executive Director Anderson indicated that he again has made no progress in obtaining any kind of internship since his September 2008 Meeting with the Board.

At 11:30 Am the Board met with Pharmacist Robert P Brower, a reciprocity candidate who had some previous felony convictions. After meeting with Pharmacist Brower, listening to his story and success in his alcoholism recovery working with the Illinois Pharm-Assist Program.

It was moved by Pharmacist Haroldson and seconded by Pharmacist Thom to accept the Application for Reciprocity from Pharmacist Robert P. Brower and to license him after the successful completion of the MPJE Examination. All Board Members voted aye - the motion carried.

Board Members executed their expense vouchers.

The Board meeting was adjourned.

President Gary W. Dewhirst, R.Ph.	Member Rick L. Detwiller, R.Ph
	, and the second
Member	Member
Laurel A. Haroldson, R.Ph.	Bonnie J. Thom, R.Ph.
 Member	Executive Director
Gayle D. Ziegler, R.Ph.	Howard C. Anderson, Jr., R.Ph.

Addendum 1

Stage 2 Program Proposal: Master of Science in Public Health (M.P.H.) Degree (with Certificate Program Component)

Department of Pharmacy Practice

College of Pharmacy, Nursing and Allied Sciences

North Dakota State University

DRAFT FOR DISCUSSION

November 2008

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Executive Summary

A confluence of market and institutional-specific forces has created a unique market niche and subsequent opportunity to offer the M.P.H. degree. At the level of the market, the provision of health care is becoming more cost-conscious, requiring practitioners in all health care fields (including, but not limited to physicians, therapists, pharmacists, nurses and veterinary science/medicine) to adopt a more fiscally responsible, comprehensive and interdisciplinary approach to patient care. Additionally, as the population ages and chronic diseases become more prevalent, disease state management (DSM) and health promotion/prevention (HPP) activities occupy a larger portion of the typical practitioner's daily routine. These activities are both cost-effective and interdisciplinary in nature, and as such will further require practitioners to interact and work cooperatively to effectively and efficiently provide patient care. The interdisciplinary nature and widespread acceptance of the M.P.H. degree makes it a natural choice for educational programming in this context.

Economic and political conditions in the State of North Dakota provide also an economically viable market to offer the M.P.H. degree. North Dakota is a geographically large state with a predominately rural population. Moreover, the North Dakota Department of Health has openly stated its desire to proactively cross-train health care personnel to fill multiple roles as dictated by the needs of its communities. There are currently no M.P.H. programs or close substitutes to the M.P.H. degree that are offered and taught specifically by faculty from North Dakota institutions of higher education. Among all colleges and universities in the State, the rural, land grant mission of NDSU makes it uniquely qualified to offer rural health care educational programming. Moreover, the NDSU has the critical mass of faculty and resources, variety of expertise, and desire to initiate and coordinate a rigorous, interdisciplinary M.P.H. program.

Our proposed program is designed for health care professionals holding a bachelor degree or higher in their field of practice. Individuals with medical, nursing or pharmacy degrees are ideal candidates for our proposed program. Other, non-medical practitioners would also be viable candidates for the degree; however, these individuals may be required to complete more prerequisite work and/or be limited to specific tracks in the program. The program would require the completion of 42 semester credit hours, and could be completed in as little as two years. Our proposal draws upon faculty and resources from the College of Pharmacy, Nursing and Allied Sciences, as well as other colleges and departments from across NDSU, including Veterinary and Microbiological Sciences; Food Safety; Sociology, Anthropology and Emergency Management; Child Development and Family Science; and the North Dakota Department of Health. Our ultimate goal is to offer the program both on-site and via distance education, thereby making the program accessible to residents across the State, and possibly in other states. Some of the coursework (e.g. Food Science) will be taught in a modular format to encourage interdisciplinary content and collaborative teaching. Lastly, certain tracks of specialization within the program will be designed to enable those currently holding a M.P.H. degree, or those currently considering the degree, to complete one or more selected specialization tracks as a certificate program.

A. Need for a New Graduate Program in Public Health

External Considerations

A confluence of market and institutional-specific forces has created a unique market niche and subsequent opportunity to offer the M.P.H. degree. At the level of the market, the provision of health care is becoming more cost-conscious, requiring practitioners in all health care fields (including, but not limited to physicians, therapists, pharmacists and nurses) to adopt a more fiscally responsible, comprehensive and interdisciplinary approach to patient care. Additionally, as the population ages and chronic diseases become more prevalent, disease state management (DSM) and health promotion/prevention (HPP) activities occupy a larger portion of the typical practitioner's daily routine. These activities are both cost-effective and interdisciplinary in nature, and as such will further require practitioners to interact and work cooperatively to effectively and efficiently provide patient care.

Economic and political conditions in the State of North Dakota provide a unique and economically viable market to offer the M.P.H. degree. There are currently no M.P.H. programs or close substitutes to the M.P.H. degree in the State. Perhaps the closest substitute is the Department of Community Medicine at the University of North Dakota (UND), which offers the University of Minnesota's Masters in Public Health (M.P.H.) degree in a distance format. Other potential substitutes include the Master of Public Administration (M.P.A.) degree offered at the University of North Dakota, the University of Mary's online Master of Business in Healthcare Administration (M.B.A.), the Master of Nursing Degrees (which may include public health coursework) offered by both UND and NDSU. While the M.P.H. program offered via the University of Minnesota is certainly a viable alternative to our proposed degree, we argue that a program specifically designed for the needs of North Dakota practitioners (and offered on site in the State) would be a more beneficial service to its population. None of the remaining programs are specifically focused on the unique combination of disease state management and health promotion activities that our program intends to offer.

Assuming no deficiencies in pre-requisite coursework, most M.P.H. programs require completion of 42 semester credit hours. Ideally, pre-requisite coursework should also be kept at a reasonable level. This would allow students to complete the program in a reasonable time frame, under two years for full-time students, and our program should attract a sustainable number of students (which we estimate at approximately 15-30 new students per cohort per year).

North Dakota has been one of the most proactive states in the country at encouraging DSM and HPP activities. For example, in 2007, the North Dakota State Legislature passed House Bill 1433 (which was subsequently signed by the Governor), allowing pharmacists and other qualified practitioners to provide, and be reimbursed for, DSM activities. NDSU's

Department of Pharmacy Practice has partnered with the North Dakota Public Employees
Retirement System (NDPERS) and the North Dakota Pharmacy Service Corporation (NDPSC)
to offer DSM activities to NDPERS enrollees suffering from diabetes. As such, there is a strong
need for pharmacists in the State to receive this type of specialized training, and the NDSU
College of Pharmacy, Nursing and Allied Sciences is uniquely positioned to offer this training.
It is also safe to assume that other practitioners (including physicians, nurses and nurse
practitioners) would benefit from this training.

More recently, the North Dakota Department of Health has expressed an interest in a graduate program to proactively cross-train health care personnel to fill public health roles as dictated by the needs of its communities. Because North Dakota is a large, rural state with an aging population, public health personnel must be cross-functionally trained in a number of core competencies (including, but not limited to leadership, cultural diversity and disease state management) not typically covered in traditional graduate public health coursework. Dr. Terry Dwelle, the State Health Officer, has recently received funding from the Bush Foundation to help develop both certificate and graduate programs that more effectively train individuals for public health careers.

The funding and the needs of the State dictate that the new program(s) must exhibit several characteristics. First, it must provide students with a core set of fundamental public health skills to ensure a base level of competency. At the same time, students must be cross-functionally trained to ensure that all public health personnel (who may initially be trained in a variety of fields, including medicine, pharmacy, nursing, human development and sociology) can effectively work together to formulate and enact public health policies. The interdisciplinary nature of the coursework also necessitates that many of the courses be taught in a modular and collaborative format. That is, a typical class would be broken down into several modules, where each module is taught by a different instructor with a specific area of expertise.

Second, the program must be flexible enough to serve the needs of the variety of constituents working (or planning to work) in the field. Some of these individuals have no public health training and might wish to complete an entire sequence of M.P.H. coursework, while others might desire a shorter certificate program, whose credits could eventually be applied towards the M.P.H. degree. Finally, a third cohort might already hold a M.P.H. degree, but be interested in additional public health coursework that focused on new, interdisciplinary content areas not covered in their original degree program. To meet these needs we propose a program that can be completed in components or stages. The specific tracks of specialization could be completed as a stand-alone certificate program. The M.P.H. degree can then be awarded in its entirety by completing the core coursework.

A final external consideration is that North Dakota is a geographically large state with a predominantly rural population. Moreover, NDSU resides in Fargo, at the eastern edge of the

State. While Fargo is the State's largest city, boasting two major health care systems and several thousand practitioners, it would be advantageous to offer the program both on-site and via distance education to maximize the potential market for the degree.

University-Level Considerations

At the level of the institution, the NDSU Department of Pharmacy Practice is interested in expanding its offering of graduate degrees. As pharmacists become more actively involved in DSM and HPP activities, there is a need for pharmacy students to obtain more specialized, post graduate training in these areas. Moreover, with the recent addition of two new faculty members whose areas of expertise lie in health administration, health promotion and outcomes assessment, the Department believes that it has nearly achieved the critical mass necessary to offer such graduate programs, especially if the program makes efficient use of existing resources, both in the College, and elsewhere in the University. The M.P.H. degree also complements graduate programs currently offered in other areas of the University, most notably Veterinary Science/Microbiology, Nursing, Food Safety, Business, Human Development, and Sociology, Anthropology and Emergency Management.

Mission Statement

The MPH program at NDSU will offer diverse, interdisciplinary tracks in public health that build on the strengths of the University and its land grant mission, to meet the practical needs of the public and health care practitioners who serve it.

Statement of Program Objectives

Based on the previous discussion, the perceived need is to offer a Master degree that exhibits the following characteristics:

- The program will focus on disease state management, health promotion and prevention, and related activities of interest to North Dakota public health care practitioners and policy makers.
- 2. The program will emphasize innovative and cross-functional approaches to public health.
- The program will seek accreditation from the Council on Education in Public Health (CEPH).
- It will be flexible enough to allow students from various health care backgrounds to enter and complete one or more of the tracks within the program with a minimum of prerequisite work.
- Students will be allowed to complete part of the M.P.H. coursework in the form of a certificate program, whose credit hours can be applied towards the completion of the M.P.H. degree.
- The number of credit hours necessary to complete the M.P.H. degree will be kept at reasonable levels. Full-time students should be able to complete the entire program in two years or less.
- It will make maximum use of existing resources at NDSU.
- It will also have the flexibility to be offered on campus at NDSU, as well as statewide via distance education and/or at satellite campuses.

We contend that a program with these objectives will not only be competitive with other alternatives in the area, but is also sustainable in the long run. In essence, such a program will not only draw students who would have otherwise enrolled in a different program, but will also draw students who would have not entered any graduate program. The program will also serve as a useful complement to students completing other degrees at NDSU. For example, students might choose to complete the M.P.H. degree in conjunction with the Pharm.D. degree, the M.S. and D.N.P. nursing degrees, and the M.S. and Ph.D. programs in Microbiology/Molecular Pathogenesis, Emergency Management, Food Safety, or Gerontology.

B. Costs and Resources

To give a justification for the resource-related needs of the proposed program, one must first provide a reasonable estimate about the number of students we hope to attract, as well as the means by which that content will be delivered. Attracting a reasonable student base should not be a substantial issue. As a conservative, short-term goal, we hope to attract 30-50 students (10-20 full time and 20-30 part time) during the first two years of operation. As a part of this goal, we hope to generate significant cross-enrollment from other graduate programs. This should be sufficient to offer the necessary courses each academic year, each with 10-20 students per course. This would also allow full-time students to complete all of the necessary course work within a 3-4 semester time span – a feature that has made related masters programs highly successful. In the long term (say, within a 5-7 year window) a reasonable goal would be to double the initial size of the program.

A more significant concern is the amount of faculty resources necessary to implement and sustain the program. Administration of the program would primarily be handled through the Pharmacy Practice Department. One new faculty member in the Department would be hired to serve as a Program Director, primarily dealing with coordination, and recruitment and advising activities for students in the program. The Director's position would require course releases for these activities.

We have the expertise within the College of Pharmacy, Nursing and Allied Sciences to staff several of the core courses, as well as all necessary coursework for one track of specialization. A more pressing issue is the strain on existing faculty in several departments due to the increased course enrollments, additional course sections and advising students as they complete their thesis and experiential work. The program would require several new courses to be developed and taught on a regular basis. Three new core classes (Health Care Delivery Systems, Leading and Managing Public Health Systems, and Environmental Health), for example, would be taught on a yearly basis. Enrollments in existing courses (for example, the Nursing Ethics, Statistics, Epidemiology and Social Psychology courses) will be expected to increase by up to 50 percent. Some of this burden may be alleviated through qualified graduate students and adjuncts who work in the community or in other areas of the University. Some of the burden must be managed through new faculty lines. We would seek to hire new tenure-track faculty: one in pharmacy administration and others with interdisciplinary expertise in various areas of public health. The new pharmacy administration position would help teach the newly developed courses such as Research Methods in Pharmaceutical Care, and Chronic Illness. All new faculty lines, in addition to the existing faculty, would be expected to advise students as they complete their Plan B thesis and practical training.

The new program will also require hiring up to three additional staff members. One or two individuals would be assigned to work with NDSU's Distance and Continuing Education Services to facilitate the development and delivery of the course content. The third staff member would assist the Program Director with admissions, paperwork, scheduling and other, related administrative tasks.

C. Accreditation Requirements

Should the M.P.H. program be approved by the University Senate and the Board of Higher Education, it will also be necessary to apply for separate accreditation from the CEPH. While the College's Pharm.D. and various nursing programs are accredited by the American Association of Colleges of Pharmacy (AACP) and Commission of Collegiate Nursing Education (CCNE), respectively, those accrediting bodies do not supersede CEPH accreditation. As part of the accreditation process, the program will need to produce (among other things) a mission statement (with evidence that the mission is being fulfilled), a suitable curriculum, evidence of enrollment sustainability and evidence of proper faculty and financial support. Given the potential market niche and the synergy between the M.P.H. program and the College's other programs, writing a viable mission statement and defending the proposed curriculum should not be difficult tasks, as it will be possible to draw heavily on documentation already generated for those other accrediting agencies. Additionally, the curriculum, its content and the number of credit hours in our proposal are based on CEPH guidelines, and thus are also comparable to those of other CEPH-accredited programs.

D. Relationship of the Program to the Institution, the System and the Region

Synergies with Existing NDSU Programs

One potential benefit to offering the M.P.H. degree is that is allows the University to augment its course offerings in other areas; for example graduate students in Human Development, Food Safety, Emergency Management or Business might find the interdisciplinary track to be a useful complement to their existing coursework.

Similarly, departments or colleges choosing to offer their own specialized tracks in the curriculum will draw upon many current courses, taught by faculty whose credentials are consistent with CEPH accreditation standards. Drawing credit hours from current programs will enhance its potential sustainability – a necessary requirement for CEPH accreditation.

Synergies with Future NDSU Programs

The M.P.H. degree program could eventually serve as a foundation for the creation of a Ph.D. program in Pharmaceutical Outcomes and Health Policy. The College currently offers M.S. and Ph.D. programs in Pharmaceutical Sciences, and a doctoral program in the administrative and social aspects of pharmacy would provide a strong complement to its scientific counterpart. Currently, the course offerings in the Pharmacy Practice Department are insufficient to support such a program.

Synergies with other NDUS Programs

As mentioned earlier in this proposal, there is not currently another M.P.H. program offered on site in North Dakota by a NDUS institution. The only program that exists is offered online by the University of Minnesota through UND, and thus is not a preferred option for most North Dakota residents. Moreover, each of the four-year degree granting institutions in the System offer one or more related undergraduate degrees (including business, human development, agricultural sciences and/or education, nursing and medicine) that would allow students to use the M.P.H. program as point of entry to the field of public health. The University of North Dakota has recently submitted a Stage 1 proposal for an MPH degree. We intend to work with UND to avoid unnecessary overlap, and allow transfer of course credits from one institution to another where appropriate. Since UND's medical school and NDSU unique tracks have little overlap, we believe a cooperative arrangement between institutions will be productive.

Synergies with the Region

Our previous discussion highlighted the need for more North Dakota practitioners to be trained in public health. The training needs to be practical and delivered in both modular and distance formats to meet the needs of these potential students. Our proposed curriculum meets these ends, and thus fills an important educational gap in the State.

Addressing the Roundtable Recommendations

The roundtable recommendations are a series of six objectives or strategies that are designed to embody the University's future aspirations. All new programs offered by NSDU are expected to contribute to the fulfillment of these objectives.

 Does the program create direct connections and contributions of the University System to the growth and vitality of North Dakota?

The crux of the proposed M.P.H. is exactly that; it intends to train rural health practitioners to meet one of the new and most important challenges facing the North Dakota economy (and its society) over the next two decades: training providers to take new leadership roles in the provision of health care. As the population ages, health promotion, disease state management and other related activities are going to be some of the most crucial components of health care. We argue that the M.P.H. degree gives practitioners in North Dakota the broad range of social, administrative and medical skills to meet this new challenge.

2. Does the program provide high quality education and skill development opportunities which enable students to advance in their careers, be good citizens and contribute to society?

The M.P.H. program will be taught primarily by core faculty from the Pharmacy Practice, Nursing, Veterinary Science/Microbiology, Food Safety, Child Development and Family Science, and Emergency Management departments. All departments are accredited where applicable or nationally recognized for excellence in teaching, service and research. Faculty from other departments, adjuncts and part-time instructors will be held to similar expectations of classroom excellence.

The fundamental nature of the M.P.H. degree will allow practitioners to advance in their careers and be good citizens. The M.P.H. is an advanced degree providing students with skills that are both technical and interdisciplinary in nature. Thus, students will increase the depth and breadth of their knowledge base, which should increase their employment opportunities and allow them to move into new areas of practice. Moreover, as its name suggests, the M.P.H.

degree gives students the skills to increase the public's health, which in and of itself is a fundamental contribution to the community.

3. Does the program contribute to a University environment that is flexible, empowering, competitive and entrepreneurial in a growing, but rural economy?

The program is designed to be flexible, empowering, competitive and entrepreneurial. It has a set of core requirements comprising approximately two-thirds of the coursework. As such, students will receive a strong set of fundamental skills that are necessary for careers in public health. These courses are also required in order to be accredited by the Council on Education in Public Health (CEPH), the national accrediting agency. It is our contention that these make the program competitive and empowering. After completing the core courses, students will select one of five specialization tracks that allow tremendous flexibility in choosing coursework and areas of specialization.

The program requires the completion of six credit hours devoted to both thesis and experiential work. Most theses in public health revolve around creating needs assessments, searching for funding sources and implementing public health interventions for a particular community. Experiential training focuses on implementing such projects. Taken in tandem, these components of the degree program require students to master all major elements of social entrepreneurship as well.

4. Is the program accessible to all residents across the State?

We intend the program to be accessible to students across the State. We initially intend to offer courses on site at NDSU's main campus in Fargo, as well as through distance education formats, including web, compressed video and/or interactive television-based instruction. If the program is successful, it may also be possible to form collaborative arrangements to offer the program's coursework at other campuses across the State.

5. Does the program have the potential to be self-sustaining and does it have the potential to use those resources to improve the excellence of the program over time?

We anticipate that the program can be fully operational and self-sufficient in two to three years, depending on the speed at which we roll out the program and the extent to which our initial funding requests are granted. Our program will generate new tuition revenue to offset some of the costs of new faculty lines. New faculty members would also be expected to secure external funding to promote their research agendas in public health, and a portion of those funds can be used to improve the excellence of the program over time.

Additionally, we intend to encourage and assist students working on theses to search out and obtain possible funding sources. These sources of funds may be grant related, or they may be

funds from local health care providers, governmental or philanthropic agencies looking for help to implement public health initiatives.

6. Is the program proactive in the sense that it can be used as a vehicle for carrying the University forward into the next century?

As argued earlier in this proposal, rural health care is a major driving force of North Dakota's economy. As the population ages, and the shortage of health care workers grows over time, finding new and inventive ways to provide medical care and promote healthy living will become a paramount concern for society. Training rural health care providers in public health, as we propose to do, is one way that North Dakotans can proactively work to meet these challenges.

E. The Proposed Curriculum and Program Requirements

Admission Requirements

Admission decisions will be made by a committee that includes the Program Director and at least 2 additional faculty. To be admitted to the M.P.H. program, students must meet the basic admission requirements of the NDSU Graduate School. Students are referred to the Graduate School for the specific details of these requirements. However, in general, these requirements represent our minimum admission standards.

- Students must hold a baccalaureate degree from an educational institution of recognized standing.
- Students must have adequate preparation in a field related to public health, with at least
 one year of experience, and show potential to undertake advanced study, research and
 practical training as evidenced by test scores (the Graduate Records Examination, MCAT
 or PCAT), previous experience and past academic performance.
- A student's undergraduate cumulative grade point average must exceed 3.0.
 Undergraduate coursework in fields related to public health should generally exceed a 3.0 average.
- International students must score above 600 on the paper version of the TOEFL or above 250 on the computer version (these are the U of M requirements)
- A portfolio should be submitted containing a letter of intent and purposes for pursuing the MPH, an official transcript of their baccalaureate or professional degree, letters of reference, a description of relevant work experience and at least two other examples of the student's writing.

Introduction and Background

Our proposal is designed for health care practitioners holding a bachelor degree or higher in their field of practice. Individuals working in fields such as nursing or pharmacy are ideal candidates for the M.P.H. degree. Individuals without this background may require more prerequisite work and/or be forced into specific tracks within the program. Assuming an individual has the appropriate background, he or she should be able to complete the entire M.P.H. program with 42 credit hours. Individuals concurrently completing a Pharm.D., a M.S. in nursing, or a graduate degree in a related field (Microbiology, Food Safety, Human Development, etc.) may double count up to 9 credit hours towards both programs, depending on their area of specialization within the program.

The program is also designed to address several other issues identified in the previous sections. First, the coursework was selected to maximize synergies with existing programs in the University. Second, a successful M.P.H. degree should be of sufficiently comprehensive and rigorous to attain accreditation by the Council on Education in Public Health (CEPH), the national accrediting organization for community health programs. All required core coursework was specifically chosen to meet CEPH guidelines. Third, individuals are allowed to select one of several concentrations or tracks. Each track emphasizes a different aspect of public health. We currently have the ability to offer five tracks of specialization.

The Director of the M.P.H. program, housed in Department of Pharmacy Practice will be responsible for admitting students into the certificate and M.P.H. programs and coordinating content and scheduling of the core courses. One necessary condition for track approval is that the coursework addresses, in a practical fashion, the seven core competencies outlined below. However, departments have flexibility in determining the depth by which those competencies are covered. They also have the ability to determine prerequisites (aside from program admission) for each and every course in their track.

The Seven Cross-Functional Core Competencies Required of Both the Core and Each Track:

- Leadership
- Communication in Informatics
- Diversity
- Public Health Biology
- Professionalism
- Program Planning
- Systems Analysis

The intent of this process is both to maximize the appeal of the program by giving students more choices, more practical course content and to minimize the amount of pre-requisite coursework. Each track in the program has different pre-requisites (and the potential to earn a certificate prior to earning the degree), so by selecting their tracks, students also select the amount of pre-requisite work to be completed. Pre-requisites for each of the courses listed below can be found in the NDSU Graduate Program Bulletin. It is expected that students have satisfied each of the prerequisites before enrolling in track-related courses. Once again, this assumes that students choose their track(s) wisely. In the vast majority of cases, admitted students will likely have fewer than 10 credits of prerequisite coursework to complete before beginning their M.P.H. coursework.

Proposed Required Core Coursework (21 credits)

CEPH Core Area	Course	Credit Hour
Biostatistics	STATS 725: Applied Statistics	3
Epidemiology	MICR 674/SAFE 674: Epidemiology	3
Environmental Health	EMGT 7XX: Emergency Management and Environ	mental
	Health for Public Health Practitioners*	3
Management	BUSN 6XX: Leading and Managing Public Health	
	Systems*	3
Social & Behavioral Sciences SOC 618: Social Psychology		3
Health Care Systems	PHRM 6XX: Health Care Delivery Systems*	2
Economics	PHRM 685: Economic Outcomes Assessment	2
Ethics:	NURS 602: Ethics	2

^{*} This course is not currently offered at NDSU, and would need to be officially developed per University guidelines.

Areas of Specialization (15 credits)

Track 1: Pharmaceutical Disease State Management

Course	Credit Hours
PHRM 520: Pediatrics and Gerontology	2
PHRM 530: Infectious Disease	3
PHRM 538: Cardiovascular/Pulmonary	4
And choose 6 credits from elective pharmaceutical care courses, including the fol	lowing:
PHRM 500: Chronic Illness*	3
PHRM 685 Cultural Competence in Health Care*	3
PHRM 6XX Research Methods in Pharmaceutical Care*	3
PHRM 6XX International Health Care and Public Health Systems*	3
PHRM 575: Advanced Pharmacy Management	3

^{*} This course is currently being developed per University guidelines.

Track 2: Emergency Management

Course	Credit Hours
SOC 620: Sociology of Disaster	3
EMGT 712: Hazards Risk Assessment Theory and Practice	3
EMGT 661: Business Continuity and Crisis Management	3
And choose 6 credits from the following courses:	
SOC 631: Environmental Sociology	3
EMGT 732: Disaster Response Theory and Practice	3
EMGT 651: Floods Blizzards and Tornadoes	3

Track 3: Infectious Disease Management

Course		Credit Hours	
MICR 650: Infectious Disease Pathoge	enesis*	3	
MICR 670: Basic Immunology	3		
MICR 6XX: Zoonoses and Rural Publi	ic Health*	3	
And choose 6 credits from <i>elective</i> graduate-level microbiology courses, including (but not limited to) the following:			
MICR 660 Pathogenic Micro	3 cr		
MICR 675 Virology	3 cr		
MICR 663 Parasitology	2 cr	(to be re-developed from 363 to 463/663)	
MICR 665 Fundamentals of Anima Disease	al 3 cr		
MICR 750 Advanced Epidemiology	y 3 cr		
MICR 762 Adv Pathogenic & & 770 Adv. Immunology	6 cr	(must be taken together)	
MICR 775 Molecular Virology	3 cr		
MICR 781 Adv. Bacterial Physiolog	gy 3 cr		
MICR 782 Molecular Micro Techni	iques 3 cr		
MICR 785 Pathobiology	3 cr		
MICR 572 Clinical Immunology	3 cr	(to be re-introduced; may replace 670 Immunology in core)	

In general, the 600 level courses are in the core, and 700 level in the electives. If a student has already taken the 400 level course, then the 700 level would be substituted into the core.

^{*} This course is not currently offered at NDSU, and would need to be officially developed per University guidelines.

Track 4 - Food Safety

15 credits total - Some courses are presently taught online or will be offered online or in short workshop format by fall 2009. Additional electives may be added later.

Required Courses (Nine 1-Credit Modules)*

Course	Credit Hours
SAFE 401/601 Food Safety Information & Flow of Food SAFE 402/602 Foodborne Hazards	
SAFE 403/603 Food Safety Risk Assessment SAFE 404/604 Epidemiology of Foodborne Illness	
SAFE 405/605 Costs of Food Safety SAFE 406/606 Food Safety Crisis Communication	
SAFE 407/607 Food Safety Risk Management SAFE 408/608 Food Safety Regulatory Issues	
SAFE 409/609 Food Safety Risk Communication & Education	

Elective Courses - Choose 6 credits from the following courses:

SAFE 652 Food Laws and Regulations	3
SAFE 684 Food Safety Practicum	1-3
SAFE 750 Advanced Topics in Epidemiology	3
SAFE 752 Advanced Food Microbiology	3
SAFE 753 Food Toxicology	2
SAFE 785 Advanced Crisis Communication*	3
SAFE 786 Risk Communication*	3

^{*} Courses currently offered via DCE

Track 5 - Gerontology

Course	Credit Hours
Required Courses (9 credits)	
CDFS 660: Adult Development and Aging	3
OR	
CDFS 786: Advanced Human Development III: Middle through Old Age	
CDFS 722: Research Methods in Gerontology	3
CDFS 760: Aging Policy	3
Elective Courses - Choose 6 credits from:	
CDFS 678: Financial and Consumer Issues of Aging	3
CDFS 681: Women and Aging	3
CDFS 682: Family Dynamics of Aging	3
CDFS 761: Applied Gerontology Programs	3
Sociology 641: Sociology of Death	3

Interdisciplinary Track

Choose any 15 credits of graduate level courses related to DSM or HPP. The course sequence must be approved in advance by the Director of the M.P.H. program.

To streamline and reduce administrative issues related to the program's launch, we do not intend to approve any courses for the Interdisciplinary Track during the first year of operation. Students intending to pursue this concentration should plan to focus on the Required Core Coursework during this time.

Thesis (3 credits)

Students must complete an analytical paper (plan B or C) related to public health. All work must be approved in advance by the Director of the M.P.H. program. Students will be assigned an advisor to whom the students will work and who will be responsible for grading student work/progress. Students using the M.P.H. as a prelude to a doctoral degree must do a Plan A thesis for at least 6 credits instead of the Plan B/C paper, and are encouraged to pursue the interdisciplinary track.

Practicum (3 credits)

Students must complete experiential work (a practicum, internship or residency) related to public health for 3 credits. All work must be approved in advance by the Director of the M.P.H. program. Students will be assigned an advisor to whom the students will work and who will be responsible for grading student work/progress. Students will not be allowed to double count work related to other degrees or past