

PROGRAMS LEADING TO AN

Associate in Applied Science Degree in Nuclear Medicine Technology

Associate in Applied Science Degree in Nursing

Associate in Applied Science Degree in Radiologic Technology

AND A

Certificate Program of Advanced Standing in Computed Tomography

70 Middle Street, Lewiston, Maine 04240

Phone: (207) 795-2840

Fax: (207) 795-2849

[www.MCHP.edu](http://www.MCHP.edu)

ACCREDITATION

Maine College of Health Professions is accredited/approved by the:

- Accreditation Commission for Education in Nursing, Inc.  
*3343 Peachtree Road NE, Suite 850  
Atlanta, GA 30326  
(404) 975-5000 [www.nlnac.org](http://www.nlnac.org)*
- Joint Review Committee on Education in Radiologic Technology  
*20 N. Wacker Drive Suite 2850,  
Chicago, IL 60606-3182  
(312)704-5300 [www.jrcert.org](http://www.jrcert.org)*
- Joint Review Committee on Educational Programs in Nuclear Medicine Technology  
*200 W. Danforth Road Suite 130 #203  
Edmond, OK 73003  
(405)285-0546 [www.jrcnmt.org](http://www.jrcnmt.org)*
- Maine State Board of Nursing  
*158 State House Station  
Augusta, ME 04333  
(207) 287-1133 [www.state.me.us/boardofnursing](http://www.state.me.us/boardofnursing)*
- New England Association of Schools and Colleges, Inc.  
*3 Burlington Woods #100,  
Burlington, MA 01803  
(855) 886-3272 [www.neasc.org](http://www.neasc.org)*

*The New England Association of Schools and Colleges, Inc. is a non-governmental, nationally recognized*

*organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.* Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school or college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff of the College. Individuals may also contact the Association.

## APPROVAL

The Maine College of Health Professions is approved by the State Approving Agency for Veterans' Education Programs for military personnel, veterans, and their eligible dependents. The College meets the requirements for the enrollment of eligible persons under the provisions of the various educational assistance programs.

## MEMBERSHIPS

American Association of Collegiate Registrars and Admissions Officers

American Association of Community Colleges

American Association for Higher Education

American Council on Education

American Registry of Radiologic Technologists

American Society of Radiologic Technologists

Association of Educators in Imaging and Radiologic Sciences

Association for Supervision and Curriculum Development

The College Board

Council for Higher Education Accreditation

Eastern Association of Student Financial Aid Administrators

Fuld Institute for Technology in Nursing Education

Maine Association of Student Financial Aid Administrators

Maine Council of Associate Degree Nursing Programs

Maine Counseling Association

Maine Higher Education Council

Maine Society of Radiologic Technologists

National Association of Independent Colleges and Universities

National Coalition of Hospital Associated Schools & Colleges of Nursing

National League for Nursing Accrediting Commission  
National Organization for Associate Degree Nursing  
New England Association for College Admission Counseling  
New England Association of Schools and Colleges, Inc.  
New England College Council  
Nuclear Medicine Technology Certification Board  
Organization of Maine Nurse Executives  
Society of Nuclear Medicine  
Society of Simulation in Healthcare

#### MISSION STATEMENT

Maine College of Health Professions' Mission is to develop leaders in nursing and allied health professions.

#### PURPOSE

The College's Purpose is to graduate an educated person.

#### VISION

The College's Vision is to create an educational environment where:

##### Students

- Are highly motivated achievers.
- Feel supported and celebrated.
- Embrace community stewardship.
- Are compassionate about patient care.

##### Faculty

- Are accomplished and leaders in their respective fields.
- Inspire and support students.
- Design and deliver innovative curriculums.
- Create an intellectual climate of collegial relationships, academic excellence, and integrity.

##### Programs

- Are responsive to Maine's health care demands.
- Are recognized for excellence.
- Emphasize interdisciplinary and community-based partnerships.

##### Resources

- Meet all student and program needs
- Support the future growth and development of the College.

#### Graduates

- Succeed in their careers and lead in their profession.
- Practice life-long learning.
- Participate in alumni activities and support the College financially.
- Embrace community stewardship.

## HISTORY OF THE COLLEGE

The College was established in 1891 as a diploma granting institution, and named the Central Maine General Hospital Training School.

The first student was admitted on July 9, 1891 and on March 24, 1893, the first student was graduated. A total of five (5) students were graduated from the College during 1893. A Cadet Program was started at the college in 1943 and remained in existence until 1946.

Until 1953, when an academic year calendar was established, admissions to the College occurred at any time during the year. Since then, students have been admitted annually.

The first male student was admitted to the College in 1953. Since then, male students have been admitted to, and present in, each class. The then existing student residences became coeducational in 1976.

The process of shortening the nursing curriculum from three (3) years (thirty-six months), to its current four (4) academic semesters, began in 1968. The College granted diplomas to its graduates until 1977, when Governor James B. Longley signed into law, L.D. 446, granting the College the authority to award an Associate in Applied Science Degree in Nursing to its graduates.

In 1976, the name of this College was changed from Central Maine General Hospital School of Nursing to Central Maine Medical Center School of Nursing.

In 1978, the Central Maine Medical Center School of Nursing became the first single entity, post-secondary nursing educational institution to become accredited by the Commission on Vocational-Technical Career Institutions of the New England Association of Schools and Colleges, Inc.

The Class of 1994 was the last class to wear the blue and white pin-striped student uniform. Beginning with the Class of 1995, the student uniform is white with the College insignia on the left chest.

In 1995, all of the College's offices and classrooms were moved to Metcalfe Building.

In 2001, the College moved into its new state-of-the-art facility at 70 Middle Street, Lewiston.

In 2002, the College began offering its Associate in the Applied Science in Nursing degree program via video-conferencing to its Rumford site and in 2003 to its Farmington site.

In 2006, the College began to offer courses to fulfill the general education component of the curriculum.

In 2007, the name of this College changed from Central Maine Medical Center School of Nursing to Maine College of Health Professions.

In 2008, the College was granted initial accreditation from the New England Association of Schools and Colleges Commission on Institutions of Higher Education.

The College added video-conferencing to its Bridgton site in 2009 and Machias in 2011.

In 2010, the College added an Associate of Applied Science Degree in Radiologic Technology. The Clark F. Miller School of Radiologic Technology was established at Central Maine General Hospital in 1949 as the first Radiologic Technology program in Maine. The School of Radiologic Technology classroom and offices moved to the second floor of the College in 2009 and the students began taking the general education courses with the nursing students in the fall 2010.

Coinciding with the addition of the Associate of Applied Science Degree in Radiologic Technology, the Mercy Hospital School of Radiologic Technology in Portland transitioned its 2-year certificate program into the College. This increased the student capacity of the Radiologic Technology program from 26 students to 46 students. Radiologic Technology students from southern Maine take their classes in Lewiston and complete their clinical rotations at Mercy Hospital and its affiliates.

The Medical Imaging Division of the College includes the Associate of Applied Science Degree in Radiologic Technology, two semester certificate program of advanced studies in Computed Tomography (CT) and the Nuclear Medicine Technology Program. The CT program admitted its first students in January 2010 and is designed for the Radiologic Technologist, Nuclear Medicine Technologist, or Radiation Therapist who wishes to continue their education in CT.

In 2011 the College received approval to offer an Associate of Applied Science Degree in Nuclear Medicine Technology. This six semester program includes two semesters of general education courses prior to completion of four semesters of Nuclear Medicine Technology courses and clinical practicum. The School of Nuclear Medicine Technology was established at Central Maine Medical Center in 1996 as the only program of its type in Maine or New Hampshire. In 2009 the program was expanded to include courses and clinical rotations in CT to meet the expanding needs of Nuclear Medicine Technology; the CT component continues to be an important part of the program curriculum.

On July 1, 2014, the name of the College was changed to the Maine College of Health Professions to better reflect the mission of the College and prevent confusion with other colleges in central Maine.

## AN EDUCATED PERSON

Maine College of Health Professions is committed to graduating an educated person.

The College believes that being an educated person means a commitment to lifelong learning, finding joy in expanding ideas, creativity and critical thinking. Courses in the sciences and humanities are necessary to developing a comprehensive education.

An educated person is one who has acquired knowledge, skills, and abilities, which will facilitate success in a variety of roles. All members of the College community commit to the following criteria, which we feel define an educated person.

An educated person:

- thinks critically and analytically; integrates and synthesizes knowledge.
- demonstrates, by moral and ethical behavior, the values of integrity, responsibility, perseverance, tolerance of ambiguity, and appreciation of diversity.
- demonstrates self-confidence, strives for emotional maturity, and values personal competence.
- appreciates the importance of the fine and performing arts.

- communicates and collaborates on a level that will facilitate the ability to work in the local community and globally.
- participates in service activities which result in a positive impact on the community.
- values lifelong learning and influences others to pursue education.

## ACADEMIC FREEDOM STATEMENT

Academic freedom is that ideal which enables educators, students, and academic institutions to inquire, discover, teach, debate, and publish. The Maine College of Health Professions, as a private non-sectarian educational institution, believes that the collective freedom of inquiry must not be motivated or dominated by political or ideological mandates regarding social responsibility and institutional policy. This academic institution is committed to upholding these beliefs.

Students in this College have the right to investigate, learn, and express their individual ideas free from faculty and institutional influence. These rights are upheld for individual students as well as the collective student body. These rights carry with them the understanding that individual student members, when expressing personal views, are doing so not as a representative of the academic institution.

As educators, the faculty has the right to inquire, teach, debate, discover, and publish unburdened by internal or external influence. Further, the faculty as citizens is entitled to the rights and responsibilities of citizenship. These rights carry with them the understanding that individual faculty members, when expressing personal views, are doing so not as a representative of the academic institution.

Academic freedom allows one the independence, in the classroom setting, to present and discuss material that is relevant to the course content and learning objectives.

## THE COLLEGE COMMUNITY

The Maine College of Health Professions is located in the industrial, urban community of Lewiston/Auburn, Maine. With a population of approximately 58,900, Lewiston/Auburn (known as L-A) is the second largest metropolitan area in Maine.

L-A is situated on the revitalized Androscoggin River which provides a number of walking trails and parks. L-A has a rich French heritage as a result of the French Canadian immigrants who came to work in textile mills and shoe shops powered by the Androscoggin River in the late 1800s. More recently, Lewiston has seen the arrival of new residents, including an active Somali and Togolese population.

The College is close to shopping areas, theaters, public libraries, colleges, churches, and a lighted ski area. The College is located within an easy driving distance of the beautiful beaches of the coast and the mountains famous for their hiking and skiing facilities.

Students enrolled in the College are primarily residents of Maine with the largest percentage coming from Androscoggin, Oxford, and Cumberland counties. The typical student population is approximately 200 students comprised of men and women whose ages range from 18 – 55 years. Approximately 25% of the student population is first generation degree seekers.

## COLLEGE ADMISSIONS

Maine College of Health Professions welcomes applications from qualified individuals who will benefit from and contribute to the educational environment of this College. The commitment of the College is to small classes and close faculty-student relationships. Thus, the Admissions Committee selects those candidates who show evidence of academic ability, intellectual curiosity, motivation and capacity for personal growth.

Interested individuals should visit our website, [www.MCHP.edu](http://www.MCHP.edu), for information and an application. Individuals may also contact the Admissions Office with specific questions: [MCHPAdmissions@cmhc.org](mailto:MCHPAdmissions@cmhc.org).

Individuals wishing to attend the Maine College of Health Professions must submit an application and meet all admission requirements.

The College follows a selective admissions procedure. Candidates should submit applications one year prior to the anticipated date of entry.

Applicants meeting the requirements for admission are accepted regardless of race, color, religion, gender, age, disability, and national origin and are accorded the rights, privileges, programs, and activities generally accorded or made available to all students at the College.

### **College Admission Requirements**

- High School diploma or GED certificate
- SAT or ACT results or 12 college credits with a grade of C or higher
- Entrance examination
- Successful completion of high school or college level Biology with a grade of C or better.
  - Successful completion of high school or college level Chemistry with a grade of C or better.
  - Successful completion of high school or college level Algebra with a grade of C or better.
  - Successful completion of a second high school or college level math with a grade of C or better.

Applicants may also be required to meet additional admission requirements and prerequisites established for the specific program of interest. For program specific requirements, please visit our website [www.MCHP.edu](http://www.MCHP.edu).

Applicants must be able to perform the physical activities inherent in the role of a student in a health professions educational program and provide documentation of immunization. A criminal background check will be required for programs which require clinical practicum. The results of the criminal background check may prevent clinical placement.

### **Application Deadlines**

Application deadlines vary by program; visit our website for specific information [www.MCHP.edu](http://www.MCHP.edu).

### **Application Procedure**

The candidate for admission to a program must submit the following information to complete the application folder:

- Completed application form accompanied by the admission essay and non-refundable application fee.
- Documentation of graduation from a state approved high school (official transcript must be mailed by the high school directly to the Admissions Office); or successful completion from a General Educational Development (GED) program (official results must be mailed directly to the Admissions Office by the institution granting the GED).
- Documentation of completion of the following high school or college level courses with a grade of “C” or

better: Biology, Chemistry, Algebra, and a second Math Course.

- Results of the SAT or ACT Examination: The SAT or ACT requirement may be waived if the applicant has completed twelve academic college credits with a minimum grade of “C” in each course.
- Entrance examination: Applicants may make an appointment to take the exam by completing the registration form on the College website, [www.MCHP.edu](http://www.MCHP.edu) or by contacting the Admissions Office: MCHPAdmissions@cmhc.org.

Admission and clinical placement are dependent upon the results of a criminal background check and submission of immunization history documentation.

Application materials should be mailed to:

*Admissions*

*Maine College of Health Professions*

*70 Middle Street*

*Lewiston, ME 04240*

## MATRICULATION

Matriculated students are those who have formally applied for acceptance into a degree or certificate program and have officially started the program.

Matriculated students will not be allowed to enter any clinical courses unless the following are received by the date requested:

### **Immunization Record**

- Two MMRs or positive titers for Measles, Mumps, and Rubella
- Hepatitis B positive surface antibody titer or documentation of 2 complete series of 3 injections of Hepatitis B vaccine if titer is negative
- Tetanus, diphtheria, and pertussis (Tdap) immunization within the last 10 years
- Two Varicella (Chickenpox) immunizations or laboratory results of a positive titer.
- Tuberculin Skin Test – Documentation of a negative PPD within two months prior to entering a program.
- Medical conditions prohibiting immunization will be considered on a case by case basis.

Students must be able to perform the physical activities inherent in the role of a student in an Associate Degree Health Professions Educational Program as listed below:

- o Communicate clearly (hearing and speaking) in English with patients and other healthcare professionals in the healthcare setting (IE. darkened rooms, operating room with surgical mask in place, in rooms with background noise, around partitions in rooms).
- o See clearly at close proximity, at a distance, in color, peripherally, demonstrate depth perception, and ability to adjust focus.
- o Stand/walk for several hours at a time.
- o Stoop, kneel, crouch or crawl.
- o Perform CPR
- o Follow Standard Precautions
- o Move/walk/run quickly in emergency situations.
- o Transport patients by wheelchair and stretcher.
- o Transfer patients from wheelchairs to hospital bed, stretchers to bed, and vice versa.

- o Position/move/adjust patients.
- o Reach overhead.
- o Lift or exert a force up to 50 pounds.
- o Tolerate repetitive use of hands, arms, and shoulders.
- o Tolerate frequent stooping and bending.
- o Perform Hand Hygiene

Evidence of current Cardiopulmonary Resuscitation (CPR) certification: American Heart Association – Basic Life Support for Healthcare Providers or American Red Cross – Basic Life Support for the Professional Rescuer Certification.

## NON-MATRICULATED STUDENTS

Non-matriculated students are those who have not been formally accepted to and officially started an academic program.

Non-matriculated students may register for general education college courses during the open registration periods providing they have met the prerequisites for the course. Such registration must be completed through the Registrar’s Office.

## AUDITING COURSES

Persons wishing to attend credit courses, but not earn credit, may enroll as auditors with the permission of the involved Director or General Education Coordinator and involved faculty member. Auditors are not counted as students in the enrollment census, do not have the course recorded on a transcript, and are not required to complete the assignments or take examinations. Tuition charges for audited courses are the same as for courses taken for credit.

## STUDENT SERVICES

### **Learning Assistance Program**

A learning assistance program is available to all Maine College of Health Professions students. This program is primarily concerned with the learning of all students. Services will include the following:

- A. Tutoring.
- B. Individual assistance in time management.
- C. Resource materials.
- D. Study skills.
- E. Computer and video assisted instruction.
- F. Self-directed study.
- G. Additional campus laboratory practice.

Students may access these services by contacting their advisor.

### **Student Success Center**

The College offers a Student Success Center for students enrolled at the College. The Center is open during regular business hours Monday through Friday. The room may be used for student study and access to reference materials. Students may also access references on the Student Success Center (SSC) page in

Moodle.

Students are encouraged to seek extra help from their course instructor or advisor by appointment as needed. Students at off-site campuses may utilize Skype to meet with their instructor or advisor by appointment for assistance.

### **Career Advisement**

Senior students learn to write a professional resume during their second year. Opportunities for employment are posted on the bulletin board in the student lounge or distributed to students electronically. Student and graduate records are available upon signed written request by the student or graduate.

### **Technology and Computer Lab Access**

The Maine College of Health Professions utilizes advanced technology in its programs. Video conferencing is used to provide courses to off-site locations.

MCHP houses a twenty-station computer lab for student use. Each computer is updated with the software necessary for students enrolled at the MCHP. Students may access the computer lab from 6 AM – 10 PM by using their College identification badge.

### **Gerrish-True Health Sciences Library**

Library services are provided to assist the student in every stage of information retrieval, from the formulation of the information request to the retrieval of the document(s) needed. Included in these services are reference assistance, computer literature searches with bibliography, interlibrary loan of materials not owned by the library, photocopying of relevant materials stored in the library and electronic access to full-text articles.

A photocopy machine is available in the library for self-service use by the students. Photocopying is limited to personal use of library materials and for personal educational purposes. Interlibrary loan of both articles and books not owned by the library may be requested. Remote access to online bibliographic databases is provided to students while enrolled at MCHP.

### **Student Leadership Opportunities**

MCHP offers opportunities for student participation in program curriculum and policy revisions. Students are invited to participate in leadership and decision-making roles as a class officer or member of the Communication Council, Curriculum Committee, or Advisory Council. Student involvement in these activities helps to improve the programs offered at MCHP and enables a student to develop leadership skills and assume responsibility.

### **Student Housing Facilities**

Rooms within walking distance to MCHP and Central Maine Medical Center are available to students enrolled in a program at MCHP. The rooms are rented with the provision that the student is responsible for the care of the room to which he/she is assigned.

Single and double occupancy rooms are available on a first-come, first-served basis. Students must request single or double occupancy rooms from the Registrar. Students may also reside off campus.

A complete list of resident rules will be presented to each resident. Students must abide by these rules. Any infraction of these rules may result in the student being expelled from the residence.

## **Parking Facilities**

Designated on-campus parking facilities are available to MCHP students with motor vehicles. Students wishing to use these parking facilities must obtain a parking application from the Registrar's Office. There is no parking fee.

Individuals parking without a permit from the MCHP, or in a non-designated parking area, will risk losing parking privileges.

## **Security**

The on-campus security personnel actively assist the MCHP in maintaining a safe and orderly campus environment. The security department may be accessed by calling 2299 on-campus or 207-795-2299 off-campus.

MCHP identification badges will be issued to all students, faculty, and staff. These badges must be worn while at the College or in the clinical areas. Access to the College, computer lab, and library may be gained by identification badge access.

Students are responsible for keeping their valuables secure and vehicles locked. Students leaving the College or clinical setting may call security for an escort to their vehicle.

Any suspicious activity noted or actual breach of security should be reported to the security office immediately.

## **Health Services**

Students shall be required to maintain adequate health in the interest of client welfare, including but not limited to, appropriate immunizations. Annually, students are provided flu immunizations. An annual Tuberculin Skin Test is required.

Matriculated students are required to purchase accident insurance through the College. The cost will be billed to the students on an annual basis. Details of the plan are available from the Registrar.

Students requiring medical attention may report to the Emergency Department at their clinical facility. Students will be billed for this service.

## **Code of Student Conduct**

By formulating a general code of ethics, rights and responsibilities, MCHP reaffirms the principle of student freedom coupled with personal responsibility and accountability for individual action and the consequences of such action. The Code of Student Conduct is included in the Student Handbook and may be accessed by contacting the Admissions Office.

## **PAYMENT OF COLLEGE FEES**

All College fees must be paid in full each semester prior to the first day of class. No student will be admitted to any class until satisfactory arrangements have been made with this College's Bursar.

A bill will be mailed to each student prior to the beginning of each semester. On each bill, the date the payment is due to be paid in full is indicated.

Students will not be allowed to register for future courses if they have not met all their financial obligations of the College.

No student will be promoted to another semester or graduated from this College until **all** bills due to the College are paid in full. Transcripts will be held until payment is received in full or arrangements have been made.

## FINANCIAL AID

### **Financial FAFSA School Code: 006305**

Any student enrolled in MCHP, who qualifies for financial assistance, will receive aid to the extent funds are available. The amount of actual aid awarded depends upon the financial need of the individual student, and, therefore, will reflect the student and/or family's financial circumstances. All such information is strictly confidential.

Financial need is the difference between costs (tuition and fees, room, board, student uniforms, books, supplies, travel and personal expenses) and the amount of money the student and/or the student's family can afford to pay, as determined by a standard formula, established by Congress, and approved by the Secretary of Education. The amount is referred to as the Federal Methodology and the calculation is:

- Cost of Attendance – Estimated Family Contribution = Need.

The basis for figuring the Expected Family Contribution is completion of the "Free Application for Federal Student Aid (FAFSA). The information provided on the FAFSA determines the expected family contribution and these results, in conjunction with MCHP's Financial Aid Information Form, are used to determine a student's financial need. A Financial Aid Professional Judgment will be done only in a most unusual situation.

Students that wish to apply for financial aid should submit the FAFSA to the Federal Processor of the U.S. Department of Education by May 1st to meet State scholarship and grant deadlines. Students are required to apply on-line at [www.FAFSA.ed.gov](http://www.FAFSA.ed.gov). Students are required to reapply for financial aid for each academic year they wish to be considered for.

### **Financial Aid Eligibility**

A student is eligible for financial assistance at the MCHP if he or she:

- is a citizen of the United States or is an eligible non-citizen;
- is not in default on a previous loan;
- does not owe a refund on a previous grant or scholarship;
- has not previously earned a baccalaureate degree [only applies to Pell and Supplemental Educational Opportunity Grant (SEOG)];
- is a matriculated student;
- is enrolled in at least 3 credit hours each semester;
- is making satisfactory academic progress; and demonstrates financial need.

Additional information regarding financial aid may be obtained from Maine College of Health Professions' Financial Aid Office. Phone (207) 795-2270.

Willful falsification or omission of information on the application is a criminal offense punishable under Maine and federal laws.

### **Independent Student Status**

To qualify for independent status, students must be financially independent of their parents, and meet the Department of Education's criteria of independence. A student is considered to be automatically independent if he or she:

- is at least 24 years old;
- is a veteran or member of the United States Armed Forces;

- is an orphan or ward of the court;
- has legal dependents other than a spouse;
- is married; or
- an emancipated minor or someone who is homeless or at risk of becoming homeless.

### **Types of Financial Aid**

#### **Financial aid awards are grants, scholarships and loans**

Grants and scholarships are given without any expectations of repayment. Loans carry appropriate obligations. The aid combination, or package, is revised each year for each student, depending upon the student's needs, and upon the availability of program funding.

The student is considered for financial aid on a basis of financial need and the amount of monies available for funding. The resulting determination, or award, is communicated to the student in the form of a financial aid "offer", which the student is free to refuse in whole or in part. However, refusal will not result in the reconsideration of the manner in which a student's aid has been proportioned between grant aid and loan aid.

## GRANTS, ENDOWMENTS AND SCHOLARSHIPS

### **Pell Grant Program**

The Pell Program is a federal program administered by the U.S. Department of Education. The intent of the program is to provide needy students with grants to assist them in attending an institution of higher education. Students with previous bachelor degrees are not eligible for this award.

### **State of Maine Grant Program (MESG)**

The MESG is a state program administered by the Finance Authority of Maine (FAME). Financially needy students that meet eligibility requirements may receive grant awards. The student's FAFSA must be filed by May 1<sup>st</sup> to be considered.

The eligibility requirements are as follows:

- U.S. citizen or an eligible non-citizen;
- Resident of Maine other than for College purposes, with Maine residency established one (1) calendar year before applying to the MESG Program;
- Graduated from an approved secondary school (or shall have completed a general education development exam);
- Demonstrate substantial financial need as computed by the FAFSA and the State of Maine formula; and
- Must be at least a one-half-time student.

### **Women's Hospital Association Fund**

The Women's Hospital Association of Central Maine Medical Center donates monies to be awarded, as grants, to deserving students with financial need.

### **Maine Orthopaedic Foundation Scholarships**

The Maine Orthopaedic Foundation of Central Maine Orthopaedics actively supports health professions education and provides funding for scholarships to three radiologic technology students and one nursing student who have demonstrated academic progress and financial need. The scholarships will be awarded in the spring semester each year.

## LOANS

**Direct Loans are low-interest loans for students and parents to help pay for the cost of a student's education**

The loan lender is the U.S. Department of Education and the department provides a single point of contact for loan servicing and student loan information.

**Direct Subsidized Loans**

For students with demonstrated financial need, as determined by the Federal Methodology. No interest is charged while the student is enrolled at least half-time, during the grace period and deferment periods.

**Direct Unsubsidized Loans**

Students who are ineligible for a subsidized loan (or whose parents have been denied a plus loan) may take out this type of loan. These loans are not based on financial need and interest is charged during all periods, even when the student is in school, and during grace and deferment periods.

**Direct (PLUS) Loans**

These are unsubsidized loans for the parents of dependent students without adverse credit history to help pay for educational expenses up to the cost of attendance less all other financial assistance. Interest is charged during all periods and a credit history is performed by the Department of Education upon application

**Enrollment Verification**

At the start of each semester, the Registrar's Office performs enrollment verification on each student. Some financial aid (Pell Grant, State of Maine Grant Program) is based partly on the number of student hours and student status – less than half time (at least 3 credit hours, half-time (at least 6 credit hours), three-quarter-time (9 credits), or full time (12 credits or more).

The Enrollment Verification Process verifies the number of credit hours for each semester. If the student is taking fewer or more credit hours than indicated and they are receiving any type of award, an adjustment to their financial aid may be necessary.

**DISBURSEMENT PROCESS**

For grants and loans from all programs, two equal installments of the aid will be credited to the student's account. Any remaining balance at each term will be payable by the due date on the term bill. When all MCHP charges have been provided for, and a credit balance arises, the student will receive a refund (allowing 14 days after the disbursement of federal funds onto the student account) to meet education expenses that are outside of MCHP's charge structure, such as the tuition for outside educational courses.

**Other Considerations**

Colleges generally do not have resources adequate to meet all the financial needs demonstrated by financial aid applicants. Therefore, students are strongly encouraged to seek outside aid from organizations concerned with such matters. While not an all-inclusive list, MCHP students have received grants from: high schools, church groups, community/hospitals/hospital auxiliaries, civic minded fraternal and professional organizations (American Legion, Kiwanis, Elks, Lions, Odd Fellows, Rebekahs, Auburn Exchange Club, etc.).

A number of students may qualify for government funds. Veterans and/or dependents may be entitled to certain VA benefits.

MCHP is responsible for administering significant amounts of financial aid, including public funds, distributed under several federal student aid programs. The applicant and the applicant's parents or legal guardians must supply accurate and complete information for the Free Application for Federal Student Aid (FAFSA).

Willful falsification or omission of information is a criminal violation, punishable under Maine and federal laws, the latter when the student is the recipient of federal loans and grants. Intentional falsification or

omission of information will result in withdrawal of all College aid, and repayment of any assistance that has been granted.

## FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS

To comply with Federal Title IV Regulations §668.34, the Maine College of Health Professions (MCHP) is required to establish and implement policies and procedures surrounding Satisfactory Academic Progress (SAP) for students who use Federal student aid to help pay for college. The SAP policies must be at least as strict as the school's policies for non-Title IV recipients, and in the case of MCHP, the policies are the same for both groups of students. The SAP policies are published in the MCHP Catalog and on its Web Site at <http://www.mchp.edu>

### **SAP Policies**

It is MCHP's policy to enforce the Federal rules surrounding SAP as defined by the following rules and procedures.

**Consistent Application of Policy – MCHP's SAP policy provides for consistent application of standards to all students within categories of students, e.g., full-time, part-time, undergraduate, and educational programs established by the school.**

MCHP's Registrar is instrumental in working with the Financial Aid Office to ensure that consistent standards are applied to all students within the categories noted above by identifying the students by category upon request by the aid office.

**Frequency of SAP Review – MCHP reviews SAP after each payment period based on pace and grade point average for each student.** All students receiving financial aid must complete a given number of credits in comparison to those attempted, as noted under Pace. The scale varies depending on the status of student - full-time, part-time or three-quarter time - and the educational program in which the student is enrolled. The scales are available upon request.

Each semester, the MCHP's Registrar provides a report to the Financial Aid Office that verifies that students listed on the official roster have achieved satisfactory progress as defined in the components of that policy listed below.

**Reinstatement of Eligibility:** Financial aid eligibility may be regained by eliminating all SAP deficiencies (at the student's expense) until the requirements of the SAP policy are met, or by the student successfully appealing their SAP status. Students who do not enroll for a semester, or pay for school at their own expense, do not automatically qualify to receive financial aid in a subsequent semester.

**Timeframe -- The maximum allowable timeframe for receiving financial aid is equal to 150% of the published length of the academic program.**

**Example:** If the program requires 70 credit hours for graduation, a student would reach the maximum timeframe at three years of enrollment.

**Pace – A student must complete 67% of credit hours attempted each semester to remain compliant with the SAP policy.** The pace is calculated by dividing the cumulative number of hours a student has successfully completed by the cumulative number of hours the student has attempted. MCHP does not include remedial courses in the Pace calculation. Transfer credit hours from another institution that are accepted toward a student's educational program are counted as both attempted and completed hours. Course incompletes and withdrawals are included in both the Pace and GPA calculations; students do receive Title IV student aid for repeating a course.

**Example:** Successfully completed credit hours (12) are divided by the attempted credit hours (16) to calculate pace (75%). The pace must be at least 67% in order to meet eligibility requirements.

$$\text{Completed Hours} \div \text{Attempted Hours} = \text{Pace}$$

Completed Credit Hours = All credit hours with a passing grade on a student's academic record, according to the Registrar (A, A-, B+, B, B-, C+, C, P, TR) and all transfer credit hours.

Attempted Credit Hours = All completed credit hours listed above, and all credit hours with a non-passing grade (C-, D+, D, D-, F, WF, WP) on a student's academic record, according to the Registrar.

|  | Enrollment In Program     |                                      |                                   |
|--|---------------------------|--------------------------------------|-----------------------------------|
|  | Full-time=<br>12+ Credits | $\frac{3}{4}$ Time =<br>9-11 Credits | $\frac{1}{2}$ Time =<br>6 Credits |
| Maximum # Academic Years to Complete Program | 3 Years                   | 4.5 Years                            | 6 Years                           |

**GPA**– Title IV aid recipients at MCHP must maintain at least a C Grade Point Average (GPA) to remain eligible to receive Federal student aid.

If a student is enrolled at MCHP more than 2 academic years, the student must have a "C" or its equivalent, or have academic standing consistent with the college's requirements for graduation. The Office of the Registrar calculates the student's grade point average using MCHP's academic standards. Students with insufficient grade point averages are notified of their status by the Financial Aid Office. Upon notification of the academic action, the Financial Aid Office will take the appropriate action.

**Financial Aid Warning and Probation** -- A financial aid committee oversees the warning, probation, dismissal, and restatement policies and procedures of the college. MCHP's policy provides that if a student drops below the required GPA, he or she will be automatically placed on "SAP Warning" status for the following semester. If, after one additional semester, the GPA does not reach the required levels, the student will be placed on "SAP Probation" status for one semester. While on "SAP Probation" status, the student can continue to receive financial aid as the result of a successful appeal and MCHP determining that the student should be able to meet the school's SAP standards by the end of the subsequent payment period, or the school develops an academic plan for the student that if followed, will ensure that the student is able to meet the MCHP's SAP standards by a specific point in time.

Students who wish to request an appeal due to death of a relative, injury or illness of the student or other extenuating circumstances must submit the request to the Financial Aid Specialist. As a part of the appeal, the student must detail the circumstances that impacted his/her performance, as well as what has changed to make rectification possible at the next point of evaluation.

If, at the end of the probation period, the GPA does not reach the required level, the student will be ineligible for all financial aid.

Students not maintaining SAP will receive a letter from the Financial Aid Office indicating any deficiencies, the actions required to resume meeting SAP, and the time in which these actions must be completed. Students receiving such letter should see an academic counselor as soon as possible.

A student who has received a Financial Aid Warning remains eligible to receive financial aid under the Title IV Higher Education Act for the upcoming probationary semester. At the end of the probationary semester, the student must successfully complete the designated number of credits. If the student has not completed the designated number of credits by the end of the probationary semester, the student will be suspended from receiving further financial aid.

The Financial Aid Office will review the appeal and notify the student in writing of the decision, within 10 business days of the date the appeal is received. The student may then appeal that decision in writing to the Director of their program or President of the College. A response will be given to the student within 10 business days from the date that the appeal is received.

To remain eligible for financial aid, the student must complete the appropriate number of credits at the conclusion of the probationary semester. The student is then required to notify the Financial Aid Office in writing that the conditions of eligibility have been met. The student will be required to observe all normal application procedures and deadlines for financial aid consideration. The Financial Aid Office will verify eligibility with the Registrar and will notify the student, in writing, that the student is eligible for Title IV financial aid.

## WITHDRAWAL AND REFUNDS

Students wishing to withdraw from the College and/or a course:

- Should contact their Director and/or Coordinator,
- Should submit a letter of resignation and the Student Status Change Form to the Registrar,
- Must contact the Registrar

Withdrawal is not considered official until the student has notified the Registrar. Until such notification, the student remains enrolled in the College and/or course and is responsible for fulfilling its academic and financial requirements.

1. Withdrawal is defined as a student who gives official notification of their withdrawal to the Registrar after a semester begins. (The student is withdrawing from all classes and leaving the College).
2. Dropping courses is defined as a reduction in course load while remaining enrolled at the College. (The student drops one or more courses but not all courses).

For purposes of calculating full tuition adjustments, the attendance period begins on the opening day of scheduled campus classes per the official academic calendar, includes weekends, holidays, and snow days, and ends on the date the student notifies the Registrar that she/he is withdrawing.

In accordance with Federal regulations, financial assistance may be adjusted for any aid recipient who withdraws during the semester. A portion of her/his financial aid may be returned to the Title IV programs as required by using the U.S. Department of Education's methodology.

Tuition and fees are reduced in accordance with the following schedule when all courses are dropped. Withdrawal in first four weeks may result in a refund to the student. MCHP Scholarships will follow the same percentage chart for funds earned and eligible to keep by the student. Direct Subsidized and Unsubsidized loans and other Title IV funds may be returned as required by the Return of Title IV Funds calculation.

**Refund of tuition and fees as indicated by the following schedule for each semester:**

| Withdrawal Date                                    | Tuition and Fees |
|--|------------------|
| Withdrawal on or before the first week of classes  | 100%             |
| Withdrawal on or before the second week of classes | 75%              |
| Withdrawal on or before the third week of classes  | 50%              |
| Withdrawal on or before the fourth week of classes | 25%              |
| Thereafter   | 0%               |

The Bursar's Office will send the student a detailed statement indicating any amounts due the College or amounts due the student as a refund. The statement will include the expected due date for any amount due back to the College for return to the Federal Programs (if applicable).

#### CORE GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE

The College is committed to graduating a person whose educational program is balanced in the three primary domains of knowledge; arts and humanities, sciences including mathematics, and the social sciences.

The College believes that being an educated person means a commitment to lifelong learning, finding joy in expanding ideas, creativity, and critical thinking.

To foster these principles, the College has implemented a minimum general education curriculum that is applicable to all Associate Degree programs at the College. This general education curriculum includes a minimum of 20 credit hours which must include the following:

|   |                   |
|---|-------------------|
| ENG 101, College Writing                                    | 3 credits         |
| Social Sciences<br>(elective or program specific)           | 3 credits         |
| Arts and Humanities<br>(elective or program specific)       | 3 credits         |
| Mathematics or Science<br>(elective or program specific)    | 6 credits         |
| General Education Courses<br>(elective or program specific) | 5 or more credits |

These are the minimum requirements for the general education coursework. For specific program requirements, please refer to the curriculum plan of the designated program.

All Associate Degree programs require completion of a minimum of 60 credit hours.

All Associate Degree programs require that a minimum of fifty percent (50%) of degree credit coursework

be completed at Maine College of Health Professions. Specific degree programs will require additional credits.

Social Science courses include Psychology, Sociology, Political Science, Economics and History.

Arts and Humanities courses include English, Literature, Communication, Ethics, Philosophy, Art, Music, Drama, Foreign Language, American Sign Language, Religion, and Global Issues.

## SCHOLASTIC STANDARDS

### Numerical and Grade Point Equivalence

| A  | 95–100   | 4.0 |
|----|----------|-----|
| A- | 90–94    | 3.7 |
| B+ | 87 – 89  | 3.3 |
| B  | 84 – 86  | 3.0 |
| B- | 80 – 83  | 2.7 |
| C+ | 77 – 79  | 2.3 |
| C  | 74 – 76  | 2.0 |
| C- | 70 – 73  | 1.7 |
| D+ | 67 – 69  | 1.3 |
| D  | 64 – 66  | 1.0 |
| D- | 60 – 63  | 0.7 |
| F  | Below 60 | 0.0 |

A student must achieve a minimum cumulative grade point average of 2.0 for graduation.

A student may access a summary of academic progress (a grade report) electronically at the end of each semester.

## HONORS

Students ranking in the top 10% of the Associate Degree programs' graduating class will receive the "Honors" designation; students ranking in the top 5% of the Associate Degree programs' graduating class will receive the "High Honors" designation.

In order to qualify for the President's Award, the highest scholastic average (clinical and theory), a student must attend the College two (2) complete academic years.

## ACADEMIC WARNING

### **Criteria for Warning**

A student whose grade is below 2.0 (letter grade "C") or whose clinical performance is below standard at mid-semester will be placed on academic warning.

### **Criteria for Warning Removal**

At the end of the semester, the student's performance will be evaluated. If the student's grade is 2.0 or above and clinical performance meets standard, the warning status will be removed. A student may receive an academic warning more than once.

### **Student Dismissal**

The College may dismiss, at any time, a student whose academic standing is not in compliance with the Scholastic Standards Policy. In most cases, students who are dismissed for academic reasons have previously been warned by the Course Coordinator or Director.

Dismissal for other than academic reasons may occur without prior warning. The decision to dismiss a student for other than academic reasons is made by the appropriate Director or designee, after consultation with referring faculty.

The student may appeal the dismissal by following the Student Fair Treatment Policy and Procedure.

The student transcript will reflect academic or non-academic dismissal.

Dismissals for other than academic reasons may include:

- a. Breach of patient confidentiality.
- b. Concealment of errors made during clinical assignments.
- c. Performing skills outside of their current role.
- d. Illicit use, possession or distribution of drugs or alcohol on campus.
- e. Possession of weapons on campus.
- f. Absence from the College for three (3) classes without notification or three (3) weeks without participation for an online course.
- g. Failure to follow College policies and procedures

## VISITORS

Visitors are always welcome on our campus, but are asked to observe the office hours of the administrative offices. Administrative offices are open 8:00 a.m – 4:30 p.m., Monday through Friday.

## ATTENDANCE

The Maine College of Health Professions is founded upon a commitment to learning on the part of both faculty and students.

When students accept membership in the educational community of this College, students also accept responsibility and accountability to be present for all required teaching/learning activities.

Program specific attendance policies are included in the student handbook and are available upon request.

## TRANSCRIPT REQUESTS

Transcripts may be requested from the Registrar in writing for prior graduates or through SONIS (online registration and billing program) for current students.

## TRANSFER CREDITS

Credits earned at regionally accredited colleges or universities will be considered for transfer to the Maine College of Health Professions at the time of student admission to the College. A student cannot transfer additional credits from other colleges or universities after admission and matriculation to the College. Matriculated students are those who have formally applied for acceptance into a degree or certificate program and have officially started the program.

Only those courses determined to be equivalent to the courses included in a specific program curriculum plan will be considered for transfer of credits. The grade received for an approved transfer course will be listed as “TR” on the College transcript and the grade will not be calculated into the student’s cumulative grade point average.

To transfer credits to the College, the student must:

- Request an official transcript be mailed directly from the institution where the credits were earned to the Registrar’s Office.
- An official course description from the year the credits were earned may be required. Check with the Registrar to determine the necessity of the course description.
- Receive a minimum grade of C in the course.
- Science courses for transfer credit must have been successfully completed within 10 years of matriculating into a program of study at the College.
- Degree specific courses for transfer credits must have been successfully completed within 2 years of matriculating into a program of study at the College.
- A maximum number of 30 credits may be transferred into the College.

Exceptions will be reviewed on an individual basis by the Program Director. These courses must be congruent with the course descriptions published in the College catalog.

## CHALLENGE EXAMS

Applicants who wish to receive academic credit for knowledge and skills acquired prior to attending the College have the opportunity to do so through the College Level Examination Program (CLEP) challenge examinations. All transfer credits including challenge exams must be completed and submitted prior to matriculation. (See Transfer Credit Policy)

The CLEP examinations for courses that are required by this College’s curriculum may be taken at an authorized testing center of the student’s choice.

### CLEP

- College Composition
- Introductory Psychology
- English Literature

- Analyzing and Interpreting Literature
- Human Growth and Development
- Elective

The scores achieved on the above challenge examinations must meet the score required by the College. Passing scores may be obtained from the Registrar's Office.

Students who wish to challenge general education credits should contact the Registrar's Office.

#### NONDISCRIMINATORY POLICY

The Maine College of Health Professions admits students and does not discriminate on the basis of religion, race, color, gender, sexual orientation, age, marital, parental or veteran's status, national or ethnic origin, and students are accorded all the rights, privileges, programs and activities available to students at the College.

An applicant must be able to perform the physical activities inherent in the role of a student in an Associate Degree health professions program.

#### ACADEMIC YEAR 2015 - 2016

Summer 2015 Session

**May 4, Monday**

Summer Semester Begins

**May 25, Monday**

Memorial Day No Classes

**June 17, Wednesday**

First Year Student Orientation for All Fall Programs

**June 27, Saturday**

Summer Session 1 Ends

**June 29, Monday**

Summer Session 2 Begins

**July 4, Saturday**

Independence Day No Classes

**August 22, Saturday**

Summer Semester Ends

#### Fall Semester 2015

**August 17 – August 27**

Introduction to Clinical Practice: Nuclear Medicine Technology, Nursing, and Radiologic Technology  
Students enrolled in CLP 100

**August 31, Monday**

Fall Semester Begins for Second Year Students and General Education Courses

**September 7, Monday**

Labor Day – No Classes

**October 12 & 13, Monday & Tuesday**

Fall Recess

**November 25 – 28, Wednesday – Saturday**

Thanksgiving Recess

**December 14 – 19, Monday – Saturday**

Fall Semester examinations

**December 19, Saturday**

Fall Semester ends after all examinations

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Spring Semester 2016

**January 4, Monday**

Spring Semester Begins

**February 15, Monday**

President's Day No Classes

**February 29 - March 5, Monday - Saturday**

Spring Recess

**April 18 – 23, Monday – Saturday**

Spring Semester examinations

**April 23, Saturday**

Spring Semester ends after all examinations

**April 30, Saturday**

College Graduation Class of 2016

#### BOARD OF TRUSTEES

**Chairman**

Marsha Auster

Auburn, ME 04210

**Treasurer**

Phil Morissette

Lewiston, ME 04240

**Trustees**

Pamela J. Baker

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Cindy Brousseau

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Lewiston, ME 04240

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## Nursing

### ASSOCIATE OF APPLIED SCIENCE DEGREE

#### ABOUT OUR PROGRAM

Nursing students attend classes and take care of patients of all ages in a variety of settings. Before they care for patients, students spend time in the campus laboratory learning and practicing the skills needed to provide safe care. Maine College of Health Professions students gain experience in the following areas: maternity, long-term care, pediatrics, surgery, critical care, rehabilitation, mental health, cardiac care and post surgery. They also have the opportunity to participate in volunteer activities such as flu immunization clinics and health fairs.

MCHP's state-of-the-art simulation laboratory provides excellent training, and clinical rotations have a low student-faculty ratio.

#### MISSION

The mission of the Nursing College is to:

- educate individuals to be competent, knowledgeable, and capable nurses who enhance positive patient outcomes;
- offer education opportunities that meet the needs of individuals and communities;
- guide individuals in the development of critical thinking skills;
- kindle an ongoing desire to learn;
- strengthen students' capacity to reason and make effective decisions as members of health care teams.

#### BRIGHT CAREER PATH

Nursing is a long-respected profession concerned with the health and wellness of people of all ages. Nurses have a growing variety of opportunities in hospitals, the military, public health, long-term care, and a variety of other settings. Nurses take care of patients by administering medications and treatments, teaching patients and families, and collaborating with doctors and other health care team members. Equally important, nurses help those in need. Nursing career options offer exciting job opportunities with competitive salaries and benefits.

#### REQUIREMENTS FOR GRADUATION

Students must earn a minimum cumulative nursing grade point average of 2.0 and a minimum grade of "C" in each required course. Students must complete 70 credit hours for the degree. A minimum of one year of credits in the nursing major must be sponsored by and taken on the Maine College of Health Professions

campus.

Each senior student must attain the national passing score on the designated exit exam to fulfill graduation requirements. The exam may be re-taken. The student may participate in graduation but will not receive a degree until this requirement is met. The deadline for completing this requirement is June 1st. If a student does not meet this requirement by June 1st, he/she will be required to repeat NUR 202.

Students will not be issued a degree if they have not met all their financial and library obligations toward the Maine College of Health Professions.

## QUALIFICATIONS FOR LICENSURE

The Maine State Board of Nursing requirements for licensure are:

- Completion of an approved four-year high school diploma or possession of the equivalent thereof (GED).
- Completion of a course of study not less than two years in an approved professional school of nursing.

## PROGRAM EDUCATIONAL OUTCOMES

Maine College of Health Professions graduates are:

- Eligible to take the Registered Nurse Licensing Examination (NCLEX-RN).
- Capable of practicing as advanced beginners in the nursing profession.
- Qualified for employment in the rapidly changing healthcare environment.

## ASSOCIATE OF APPLIED SCIENCE DEGREE IN NURSING

### Curriculum Plan

| First Semester (Fall)                                    | Credit Hrs |
|--|------------|
| CLP 100(N) Introduction to Clinical Practice – Nursing 1 |            |
| NUR 101 Fundamentals in Nursing                          | 8          |
| ENG 101 College Writing                                  | 3          |
| PSY 101 Introduction to Psychology                       | 3          |
| BIO 111 Human Anatomy & Physiology I                     | 4          |
| Second Semester (Spring)                                 |            |
| NUR 102 Nursing Care Across the Lifespan I               | 10         |
| PSY 201 Developmental Psychology                         | 3          |
| BIO 112 Human Anatomy & Physiology II                    | 4          |
| Third Semester (Fall)                                    |            |
| NUR 201 Nursing Care Across the Lifespan II              | 10         |
| NUR 210 Pharmacology for Nursing                         | 3          |
| BIO 213 Microbiology                                     | 4          |
| Fourth Semester (Spring)                                 |            |
| NUR 202 Nursing Care Across the Lifespan III             | 11         |
| HUM XX Arts and Humanities Elective                      | 3          |
| SSC XX Social Science Elective                           | 3          |

Total Credits Upon Graduation 70 credit hours

*The curriculum plan is subject to change.*

*The curriculum plan with specific courses required for graduation will be distributed upon acceptance.*

**Distribution of AAS Credit Hour**

Communication, Arts & Humanities, (21%)  
and Social Science  
ENG 101, PSY 101, PSY 201,  
Humanities Elective, Social Science Elective

Sciences and Math (17%)  
BIO 111, BIO 112, BIO 213

Concentration (61%)  
CLP 100 (N), NUR 101, NUR 102, NUR 201, NUR 202, NUR 210

## Radiologic Technology

### ASSOCIATE OF APPLIED SCIENCE DEGREE

#### ABOUT OUR PROGRAM

The Clark F. Miller Radiologic Technology Program at the Maine College of Health Professions offers a challenging and rewarding career educational opportunity. The College's two year associate of applied science degree program provides instruction and clinical experience through a blend of classroom and clinical education.

The Program begins in August each year. Students attend the College on a full-time basis, attending classes an average of two days a week and participate in a clinical environment three days a week in medical imaging departments throughout Maine. Clinical training covers all areas of diagnostic radiography and introduces students to medical imaging specialties. Program graduates are eligible to apply for the American Registry of Radiologic Technologist examination and obtain Maine State Licensing.

#### CAREER OPPORTUNITIES

A radiologic technologist is educated in the "art and science" of creating images of the body using ionizing radiation. Radiologic technologists work closely with physicians, particularly physicians who specialize in radiology, and play an important role as part of professional healthcare teams.

Radiologic technologists work in hospital medical imaging departments, clinics, doctors' offices, and imaging centers.

Because of the strong demand for radiologic technologists, a career in the field can lead in many directions. Specialized areas of medical imaging include computed tomography (CT), mammography, magnetic resonance imaging (MRI), vascular-interventional radiography, sonography, nuclear medicine, and radiation therapy. Technologists may earn a bachelor's degree in pursuit of a career in education, management, or research. Career options in medical imaging continue to grow, providing job opportunities with competitive salaries and benefits.

#### MISSION

The mission of the Clark F. Miller Radiologic Technology Program is to:

- Encourage motivated individuals who are dedicated to pursuing excellence in Radiologic Technology;
- Provide a quality education in Radiologic Sciences with emphasis in Diagnostic Radiography including all modalities of Medical Imaging;
- Offer educational experiences in the classroom, the campus laboratory, and in a variety of clinical settings with emphasis on exceptional patient care; and
- Educate individuals to be competent and knowledgeable technologists who demonstrate critical thinking and effective communication skills.

#### REQUIREMENTS FOR GRADUATION

Students must earn a minimum cumulative grade point average of 2.0 and a minimum grade of “C” in each required course. Students must complete 73 credit hours for the degree. A minimum of one year of credits in the radiography major must be sponsored by and taken on the Maine College of Health Professions campus.

Students will satisfactorily complete clinical competency evaluations and clinical labs as specified by the clinical competency section of the Student Handbook. Students will demonstrate competency in CPR, vital signs, sterile and aseptic technique, venipuncture, transfer of patient, and care of patient medical equipment.

Students will make up time missed from the clinical area which is in excess of time allotted during the program. Students will not be awarded a degree if they have not met all their financial and library obligations toward the Maine College of Health Professions.

#### PROGRAM EDUCATIONAL OUTCOMES

The program’s mission will be achieved by fulfillment of the following program goals:

- Graduates will demonstrate competency in performing radiographic procedures.
- Graduates will effectively communicate in the medical imaging department to provide quality patient care.
- Graduates will demonstrate problem solving and critical thinking skills to evaluate and address a variety of situations in medical imaging.
- Graduates will demonstrate professional development and growth.
- Graduates will achieve A.R.R.T. certification and become employed in medical imaging.

#### QUALIFICATIONS FOR LICENSURE

The Maine Radiologic Technology Board of Examiners requirements for licensure are:

- Completion of an approved high school diploma or its equivalent; and
- Completion of a course of study in radiologic technology and an examination that is approved by the board.

#### ASSOCIATE OF APPLIED SCIENCE DEGREE COMPLETION PROGRAM IN RADIOLOGIC TECHNOLOGY

This program is designed for the nationally certified and registered radiologic technologist who wishes to complete the general education courses to fulfill the requirements for the Associate of Applied Science Degree in Radiologic Technology.

Students must complete the general education courses specified by the Radiologic Technology Program Curriculum Plan. Students are required to complete a minimum of 25% of the total College Credits required of the Associate of Applied Science Degree Radiologic Technology Program at the Maine College of Health Professions.

#### ASSOCIATE OF APPLIED SCIENCE DEGREE IN RADIOLOGIC TECHNOLOGY

##### **Curriculum Plan**

First Semester (Fall)

Credit Hrs

CLP 100(R) Introduction to Clinical Practice – Radiologic Technology 1

|                               |                                       |                 |
|-------------------------------|---------------------------------------|-----------------|
| PRO 101                       | Rad. Procedures I                     | 3               |
| PHY 101                       | Applied Physics                       | 2               |
| HCS 101                       | Introduction to Healthcare Science    | 3               |
| BIO 111                       | Human Anatomy & Physiology I          | 4               |
| CLN 101                       | Clinical Practicum I                  | 4               |
| Second Semester (Spring)      |                                       |                 |
| PRO 102                       | Rad. Procedures II                    | 3               |
| PRE 101                       | Rad. Exposure/Physics I               | 3               |
| BIO 112                       | Human Anatomy & Physiology II         | 4               |
| CLN 102                       | Clinical Practicum II                 | 4               |
| Third Semester (Summer)       |                                       |                 |
| ENG 101                       | College Writing                       | 3               |
| MAT 140                       | College Algebra                       | 3               |
| PTH 201                       | Radiographic Pathology                | 1               |
| CLN 103                       | Clinical Practicum III                | 4               |
| Fourth Semester (Fall)        |                                       |                 |
| PRO 201                       | Rad. Procedures III                   | 3               |
| PRE 201                       | Rad. Exposure/Physics II              | 3               |
| APC 201                       | Advanced Patient Care                 | 1               |
| MOD 201                       | Rad. Supplemental Modalities          | 2               |
| PSY 101                       | Intro to Psychology                   | 3               |
| CLN 201                       | Clinical Practicum IV                 | 4               |
| Fifth Semester (Spring)       |                                       |                 |
| RQA 201                       | Rad. Quality Assurance                | 1               |
| RPB 201                       | Rad. Protection & Radiobiology        | 2               |
| PRP 201                       | Graduation/Registry Preparation       | 1               |
| IMA 201                       | Image Analysis                        | 1               |
| ELE XXX                       | Humanities or Social Science Elective | 3               |
| COM 102                       | Communications                        | 3               |
| CLN 202                       | Clinical Practicum V                  | 4               |
| Total Credits Upon Graduation |                                       | 73 credit hours |

*The curriculum plan is subject to change.*

*The curriculum plan with specific courses required for graduation will be distributed upon acceptance.*

#### **Distribution of AAS Credit Hour**

|  |       |
|--|-------|
| Communication, Arts & Humanities,<br>and Social Science<br>ENG 101, COM 102, PSY 101,<br>Humanities or Social Science Elective | (16%) |
| Sciences and Math<br>BIO 111, BIO 112, MAT 140   | (15%) |

Concentration (68%)  
CLP 100(R), PRO 101, 102, 201, PRE 101, 201,  
HCS 101, PHY 101, PTH 201, MOD 201,  
RQA 201, RPB 201,  
PRP 201, APC 201, IMA 201, CLN 101,  
102, 103, 201, 202

## Nuclear Medicine Technology

### ASSOCIATE OF APPLIED SCIENCE DEGREE

#### ABOUT OUR PROGRAM

Maine College of Health Professions' Nuclear Medicine Technology Program was founded in 1996 in response to a rapidly changing healthcare environment. The program offers a six-semester course which includes two semesters of general education courses and four semesters of study in nuclear medicine technology, including computed tomography (CT).

The challenging curriculum consists of classroom instruction, on-line participation, self-study, and clinical education. Students attend the program on a full-time basis and gain valuable experience from classroom work, simulation, and hands-on clinical applications in medical facilities throughout Maine.

Upon graduation from the program, graduates are eligible to apply for national certification examinations in both nuclear medicine technology and CT and are eligible for Maine state licensing.

#### CAREER OPPORTUNITIES

Nuclear medicine studies make a difference in the care of patients and in the quality of patients' lives. Nuclear medicine is a medical specialty that uses very small amounts of radioactive materials to diagnose and treat disease. Diagnostic nuclear medicine can provide information about the function of nearly every organ in the body. Nuclear medicine procedures often identify problems early in the disease process, long before they are apparent with other diagnostic tests. These studies are often used in conjunction with (CT) to provide three-dimensional views of organs and the location of problems within the organ.

Demand for nuclear medicine technologists in many healthcare settings - including hospitals, clinics, doctors' offices or imaging centers - is strong across the country.

The exciting and dynamic field of nuclear medicine is constantly changing and career opportunities continue to expand, providing job opportunities with competitive salaries and benefits. A career in nuclear medicine technology provides a variety of opportunities. Nuclear medicine technologists may choose to specialize in PET scanning or nuclear cardiology. They may continue their education to obtain an advanced degree in pursuit of a career in education, management, or research.

#### MISSION

The mission of the Nuclear Medicine Technology Program is to:

- Encourage motivated individuals who are dedicated to pursuing excellence in Nuclear Medicine

Technology;

- Provide a quality education in Nuclear Medicine Technology including Computed Tomography Technology;
- Offer educational experiences in the classroom, the campus laboratory, and in a variety of clinical settings with emphasis on exceptional patient care; and
- Educate individuals to be competent and knowledgeable technologists who demonstrate critical thinking and effective communication skills.

## REQUIREMENTS FOR GRADUATION

Students must earn a minimum cumulative grade point average of 2.0 and a minimum grade of 74 (C) in each required course. Students must complete 69, 78, or 81 credit hours for the degree depending upon previous academic preparation of the students. A minimum of one year of credits in the nuclear medicine technology major must be sponsored by and taken on the Maine College of Health Professions campus.

Students will satisfactorily complete clinical competency evaluations and clinical labs as specified by the clinical competency section of the Student Handbook. Students will demonstrate competency in CPR.

Students will make up time missed from the clinical area which is in excess of time allotted during the program. Students will not be awarded a degree if they have not met all their financial and library obligations toward the Maine College of Health Professions.

## PROGRAM EDUCATIONAL OUTCOMES

The program's mission will be achieved by fulfillment of the following program goals:

- Educate Nuclear Medicine students that meet the entry level expectations of employers and have excellent patient care skills.
- Present the didactic and clinical experiences necessary to successfully pass the A.R.R.T. and the N.M.T.C.B. examinations.
- Maintain high academic standards and to constantly improve and update the program curriculum.
- Provide a positive learning environment in both the academic and clinical settings.

## QUALIFICATIONS FOR LICENSURE

The Maine Radiologic Technology Board of Examiners requirements for licensure are:

- Completion of an approved high school diploma or its equivalent; and
- Completion of a course of study in nuclear medicine technology and an examination that is approved by the board.

## ASSOCIATE OF APPLIED SCIENCE DEGREE IN NUCLEAR MEDICINE TECHNOLOGY

### **Curriculum Plan**

Prerequisites to the Nuclear Medicine Professional Curriculum: College Level General Chemistry with lab and General Physics. Introduction to Health Care is required for those with no health care background.

Pre-Nuclear Medicine - Semester I Credit Hours

|                                    |   |
|------------------------------------|---|
| ENG 101 College Writing            | 3 |
| PSY 101 Introduction to Psychology | 3 |

|  |   |
|--|---|
| MAT 140 College Algebra  | 3 |
| BIO 111 Human Anatomy & Physiology I                               | 4 |
| HCS 101 Introduction to Healthcare Science                         | 3 |
| (HCS 101 may be waived if the student has a healthcare background) |   |

Pre-Nuclear Medicine - Semester II

|                                       |   |
|---------------------------------------|---|
| HUM XXX Humanities Elective           | 3 |
| BIO 112 Human Anatomy & Physiology II | 4 |
| COM 102 Communications                | 3 |

Nuclear Medicine Major - Semester III

|   |   |
|---|---|
| CLP 101 (NM) Introduction to Clinical Practice – Nuclear Medicine | 1 |
| NM 120 Nuclear Medicine Physics I                                 | 2 |
| NM 130 Radiochemistry and Radiopharmacy                           | 3 |
| NM 140 Nuclear Medicine Procedures I                              | 4 |
| NM 150 Clinical Practicum I                                       | 4 |

Nuclear Medicine Major - Semester IV

|   |   |
|---|---|
| NM 160 Radiobiology I                                     | 1 |
| NM 170 Nuclear Medicine Procedures II                     | 2 |
| NM 180 Introduction to Research Methods                   | 3 |
| NM 210 Mathematics and Statistics<br>for Nuclear Medicine | 2 |
| NM 190 Clinical Practicum II                              | 4 |

Nuclear Medicine Major - Semester V

|  |   |
|--|---|
| NM 200 Nuclear Medicine Procedures III                               | 2 |
| NM 220 Radiopharmacy and Pharmacology                                | 3 |
| NM 240 Computers and Medical Informatics                             | 2 |
| NM 205 Clinical Practicum III  | 4 |
| CT 100 Multiplanar Anatomy   | 3 |
| CT 110 Patient Care and Radiation<br>Safety in CT Scanning           | 2 |
| (CT courses may be waived if student is nationally registered in CT) |   |

Nuclear Medicine Major - Semester VI

|  |   |
|--|---|
| NM 230 Nuclear Medicine Procedures IV  | 3 |
| NM 260 Registry Review Seminar   | 1 |
| NM 270 NM/CT Clinical Practicum IV or<br>NM 275 NM Clinical Practicum IV-A<br>(for CT Certified Technologists) | 5 |
| CT 120 CT Procedures   | 2 |
| CT 130 CT Physics and Instrumentation  | 2 |
| (CT courses may be waived if student is nationally registered in CT)   |   |

Total Program Credits                      69, 78, or 81 Credit Hours (dependent upon previous academic preparation of the student.)

*The curriculum plan is subject to change.*

*The curriculum plan with specific courses required for graduation will be distributed upon acceptance.*

### **Distribution of AAS Credit Hour**

Communication, Arts & Humanities (15%)  
and Social Science

ENG 101, COM 102, HUM XXX, PSY 101

Mathematics and/or Science (14%)

MAT 140, BIO 111, BIO 112

Concentration (71%)

CLP 100(NM), NM 120, 130, 140, 150, 160,  
170, 180, 190, 200, 201, 205, 220, 230, 240, 260, 270, 275  
CT 100, 110, 120, 130

Computed Tomography (CT)

CERTIFICATE PROGRAM OF ADVANCED STANDING

### **ABOUT OUR PROGRAM**

The Maine College of Health Professions offers a challenging and rewarding career opportunity for the motivated Radiologic Technologist including Radiographers, Nuclear Medicine Technologists, and Radiation Therapists in the field of Computed Tomography. The College offers a program of advanced studies in CT. The program will include academic and clinical courses and will be tailored to meet the needs of the student. Part-time and full-time options are available. Graduates will obtain the didactic information and clinical procedures required to apply to take the American Registry of Radiologic Technologists certification examination in CT.

### **CAREER OPPORTUNITIES**

A certified CT technologist is educated in the “art and science” of creating computerized images of the body using ionizing radiation. CT technologists work closely with physicians, particularly physicians who specialize in radiology, and play an important role as part of professional healthcare teams.

CT technologists work in hospital medical imaging departments, clinics, doctors’ offices, and imaging centers. CT technologists are often vital members of the trauma team in the hospital setting.

Because of the strong demand for CT technologists, a career in the field can lead in many directions. CT Technologists may earn a bachelor’s degree in pursuit of a career in education, management, or research. Career options in medical imaging continue to grow, providing job opportunities with competitive salaries and benefits.

### **MISSION**

The mission of the Computed Tomography Program is to:

- encourage motivated individuals who are dedicated to pursuing excellence in Computed Tomography

Technology;

- provide a quality education in Computed Tomography Technology;
- offer educational experiences in the classroom, the campus laboratory, and in a variety of clinical settings with emphasis on exceptional patient care; and
- educate individuals to be competent and knowledgeable technologists who demonstrate critical thinking and effective communication skills.

## REQUIREMENTS FOR GRADUATION

Students must earn a minimum cumulative grade point average of 2.0 and a minimum grade of 74 (C) in each required course. Students must complete 16 credit hours for the certificate. All of the credits in the CT major except for multiplanar anatomy must be sponsored by and taken on the Maine College of Health Professions campus.

Students will satisfactorily complete clinical competency evaluations labs as specified by the clinical competency section of the Student Handbook.

Students will make up time missed from the clinical area which is in excess of time allotted during the program. Students will not be awarded a certificate if they have not met all their financial and library obligations toward the Maine College of Health Professions.

## PROGRAM EDUCATIONAL OUTCOMES

The program's mission will be achieved by fulfillment of the following program goals:

- Educate CT Technologists that meet the entry level expectations of employers and have excellent patient care skills.
- Present the didactic and clinical experiences necessary to successfully pass the ARRT examination.
- Maintain high academic standards and to constantly improve and update the program curriculum.
- Provide a positive learning environment in both the academic and clinical settings.

## QUALIFICATIONS FOR LICENSURE

The Maine Radiologic Technology Board of Examiners requirements for licensure are:

- Completion of an approved high school diploma or its equivalent; and
- Completion of a course of study in radiologic technology and an examination that is approved by the board.

## CERTIFICATE PROGRAM IN COMPUTED TOMOGRAPHY

### Curriculum Plan

| Semester I  |   | Credit Hours |
|-------------|---|--------------|
| CT 100      | Multiplanar Anatomy                               | 3            |
| CT 110      | Patient Care & Radiation<br>Safety in CT Scanning | 2            |
| Semester II |   |              |
| CT 120      | CT Procedures                                     | 2            |
| CT 130      | CT Physics & Instrumentation                      | 2            |

|          |   |   |
|----------|---|---|
| CT 140   | CT Clinical Practicum I                               | 3 |
| CT 150-1 | CT Clinical Practicum II*<br>(for full-time students) | 3 |

#### Semester III

|          |   |   |
|----------|---|---|
| CT 150-2 | CT Clinical Practicum II*<br>(for part-time students) | 3 |
|----------|---|---|

Total Credits Upon Graduation 15 credit hours

\*CT 150 – Clinical practicum may be completed on a full-time basis in the second semester or on a part-time basis in the third semester.

*The curriculum plan is subject to change.*

*The curriculum plan with specific courses required for graduation will be distributed upon acceptance.*

*Students currently working in CT may enroll in the didactic portion of the curriculum only.*

## Course Descriptions

### GENERAL EDUCATION COURSES

#### **BIO 111: Human Anatomy & Physiology I**

Credits 4: Lecture 3, Lab 1.

Prerequisite: high school level chemistry

Human Anatomy and Physiology I is the first semester of a two semester course in human anatomy and physiology. Anatomy is the study of the form of the body and physiology is the study of body function. This course begins with instruction in the terminology needed to be able to intelligently read and communicate biological concepts in an appropriate manner. The course will then progress through the cellular, tissue, organ, and finally the system level of the human organism. In general, the lecture portion of the class will emphasize the physiological concepts and the laboratory section will emphasize anatomy. Anatomy can be better studied and easier learned by visualization in a three dimensional manner by using anatomical aids, such as models, charts, specimens, and slides which are available in the laboratory.

#### **BIO 112: Human Anatomy & Physiology II**

Credits 4: Lecture 3, Lab 1.

Prerequisite: BIO 111

This lecture and laboratory course is the second semester of a two semester course in human anatomy and physiology. This course continues the study of the structure and function of the human body and the body's reaction to physiological stress. This course, when taken following BIO 111 Anatomy and Physiology I, will provide the student with a basic understanding and working knowledge of the human body. Students will study the following systems: Endocrine, Lymphatic/Immunity, Cardiovascular, Respiratory, Digestive, Urinary and Reproductive, as well as Fluid/Electrolyte/Acid/Base Balance and Embryonic Development. The lecture portion of the class will emphasize the physiological concepts and the laboratory section will

emphasize anatomy.

**BIO 213: Microbiology**

Credits 4: Lecture 3, lab 1.

Prerequisites: BIO 111 and BIO 112

This course consists of lecture and the complementary laboratory component offered concurrently. The lecture provides a survey of the microbial world including bacteria, yeasts, molds, fungi, and viruses. The primary focus of the course is on the relationship between humans to immunity. Students will develop an understanding of prokaryotic cell structure, bacterial genetics and metabolism, control of microbial growth, how microbes cause specific disease, and various public health and medical interventions to combat microbial disease. The laboratory component is designed to complement the lecture by engaging the student in performance of laboratory techniques and procedures that are routine to modern microbiology. Topics covered include aseptic technique, maintenance, isolation, and differential cultures of microorganisms, microbial metabolic assays, and microbial staining.

**ENG 101: College Writing**

Credits 3

Prerequisites: Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

College Writing is a required course which develops the student's ability to write clearly and effectively. The course introduces the student to academic writing, APA citation style, research-based exposition, and the fundamentals of academic research. The course introduces students to the development and synthesis of argumentation in the writing process. Revision and editing will be introduced to help students develop skills to consistently improve their writing abilities. Practice in expository writing – specifically informative, persuasive, analytical, and narrative – will be the focus.

**ENG 110: Introduction to Literature**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

This course introduces students to genres of fiction, memoir and poetry. By studying important works by writers of culturally diverse backgrounds, students gain experience in reading, analyzing, interpreting, and writing about literature. This course establishes connections between literature and other areas of arts and communications.

**ENG 120: Creative Writing**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

Do you struggle with writing well? Does the idea of learning better written communication skills in a classroom stress you out? Do you have a creative side, or are you looking for a creative outlet or stress reducing activity while you also learn a few writing tricks and tips? Are you interested in becoming a better writer while having fun and playing with words? This course will teach you how to improve your writing clarity, structure, organization, mechanics, and grammar while you learn to have fun with writing and craft your own stories, essays, and poems at the same time.

### **PSY 101: Introduction to Psychology**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

This course studies psychology as an applied science and explores the factors, genetic and environmental, which influence behavior and affect the quality of life. The course begins with a brief history of the development of psychology as a science of human behavior and covers such topics as: psychology of learning, social psychology, human sexuality, stress and coping, as well as abnormal behavior and treatments. Through assigned readings and projects, students will become more aware of how they may better interact with others and thus improve the quality of life.

### **PSY 201: Developmental Psychology**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

This course provides the student with a multi-disciplinary study of life span development. Included will be discussions of genetic, environmental, psychological and sociological influences that produce changes in physical, cognitive and psychosocial domains of individuals.

### **COM 102: Communications**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

The importance of good communication skills can never be over-emphasized. In all professions including healthcare, we are asked to: send clear messages, be able to receive and interpret messages accurately, and respond appropriately. Although most of us will never become professional public speakers, we are always expected to be able to understand the basic elements of good communication. To that end, this course will cover verbal and non-verbal communication skills, listening, writing messages/notes/memos, and public speaking.

### **HUM 205: Ethics in Healthcare**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

This course introduces health career students to ethical and bioethical issues confronting the healthcare professionals within the practice setting. This course will introduce the student to the language of ethics and to a decision-making process. Using cases, students will learn to apply ethical decision-making principles to practical dilemmas. The course will familiarize students with ethical and legal considerations, patient-provider relationships, and the concepts of moral judgment and prudence.

### **HUM 206: Ethics and Clinical Care**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

Everyday clinical providers are dealing with dilemmas. Family issues, care planning, goal setting, and non-compliance force their way into providing care. What are the red flags? How does the caregiver develop

options for the decision makers? What is good informed information sharing? How does the caregiver get assistance in the ethical decision-making process? This course will take you through an introduction to ethical decision-making, its rules and guidelines, developing a process of review and information sharing. Using a case study approach, the class participant will hone their ethics intuitiveness and develop a broader plan of options that the patient with their decision counselors can choose from.

**REI 290: Reiki: History and Practice, 3 credits**

Prerequisite: ENG 101 or by permission of the instructor.

This course is designed to present the fundamentals of Reiki through theory and experience. Reiki is a Japanese technique for stress reduction and relaxation that promotes healing and may be used for self-care. The student is introduced to the concepts of ethics, communication, professional behavior, cultural awareness, and Reiki techniques. This course is open to students interested in holistic health and Reiki as practiced in medical settings and for personal health. Successful completion of the course may result in the student progressing to a Level 2 Reiki practitioner.

**HIS 211: Current Trends in Healthcare**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

The health care industry is the largest service employer nationally, statewide and locally. It is a costly service; by 2018 \$4.4 trillion will be spent in the US on health care. There are many factors shaping health care delivery today. It is important for the healthcare professional at all levels to understand the characteristics of and the forces behind this enormous industry. These factors will influence the working conditions as well as determine what it will take to be successful in this chosen field.

**MAT 120: Applications in College Algebra**

Credits 3

Prerequisites: Accuplacer Elementary Algebra & Reading Comprehension Scores of 60 or higher.

This course will take an exploratory look into the application of algebraic concepts to real-world problems. Instead of formula memorization, students will be instructed on the methods for applying concepts learned in a standard College Algebra course, with a focus on classroom discussion and group investigation. Topics will include linear, quadratic, rational, exponential, and logarithmic functions, graphical analysis, and systems of equations.

**MAT 140: College Algebra**

Credits 3

Prerequisites: Accuplacer Elementary Algebra & Reading Comprehension Scores of 60 or higher.

This course will review standard college-level algebra topics including linear, quadratic, rational, exponential, and logarithmic functions; the study of inequalities graphical analysis; polynomials; systems of equations, and more. Throughout the course, focus will include the application of these topics to real problems.

**MET 111: Medical Terminology**

Credits 3

Prerequisites: ENG 101 or Accuplacer Write Placer Score of 5 or higher & Reading Comprehension Score of 60 or higher.

This course is designed to assist the learner to develop a medical terminology vocabulary utilizing a body systems approach that will facilitate communication of medical information in a medical office or hospital environment. The learner will learn and practice the principles of medical words formation, including the basic rules of building medical words, identifying suffixes, prefixes, and combining forms related to the structures and functions of the associated systems of the body.

**CNA 030: State Approved CNA Certificate**

Prerequisite: High School Graduate or GED

This course is designed to present the knowledge and clinical skills necessary to become a certified nursing assistant. The curriculum follows Maine guidelines, including: caring for the patient's physical systems, infection control, care of patients throughout the lifespan, and entering the healthcare field. The student is introduced to the concepts of legal and ethical aspects of care, communication, documentation, and safety. The state certification examination will be offered at the end of the course.

**PHL 100: Phlebotomy**

Credits 2

This course is designed to provide students with the knowledge and clinical skills to become a phlebotomist. This course includes study of the role of the phlebotomist, the function of each clinical laboratory section and the functions of personnel employed in the clinical laboratory. The course will focus on laboratory safety, basic anatomy of the circulatory system, venipuncture equipment and techniques, dermal puncture equipment and techniques, as well as complications associated with phlebotomy and legal issues associated with phlebotomy.

**SEM 020: Bridge to College Transition**

Credits 1

If you are new to the college environment, this course is for you. It will help students transition to the requirements of college level coursework. This course is mandatory for students enrolling in general education courses or the pre-health career tracks who have not previously completed at least 12 college credits of academic course work. It is recommended for anyone who is interested in learning skills needed to be a successful students at Maine College of Health Professions. In this course you will learn study skills and test-taking strategies, develop time management strategies for dealing with the intensive course load at this college, learn how to navigate the college system, and learn APA citation style and information literacy.

**MAT 011: Math Review**

Credits 3

Prerequisites: Accuplacer Elementary Algebra & Reading Comprehension Scores of 40-59.

This course will focus on the fundamentals of numerical mathematics, including basic arithmetic operations with integers, fractions, decimals, and percent; a review of unit conversions; basic algebraic techniques; and an introduction to computing probabilities of events.

**ENG 010: Developmental Writing, 3 credits**

Prerequisite: Accuplacer WritePlacer Score of 3-4 & Reading Comprehension Score of 40-59.

Developmental Writing is a 3 credit course designed to help students achieve basic competencies in reading comprehension and writing, including sentence skills, grammar and mechanics, planning documents, organizing papers, developing research skills, following written instructions, and comprehending written documents. We will also address word recognition, vocabulary development, and identifying themes and

main ideas in written documents. In addition, the course will address basic software skills necessary to complete online learning goals, access online research platforms, and write documents using word processing software.

## NURSING COURSES

### **CLP 100(N) - Introduction to Clinical Practice – Nursing**

Credits 1

Prerequisites: Admission to the Nursing Program

The course will familiarize health profession students with the College policies, healthcare procedures, and technology. In addition, the course will facilitate the students' transition from the classroom to the clinical area. Emphasis will be placed on introducing the student to the equipment and practices specific to the field of nursing.

### **NUR 101: Fundamentals in Nursing**

Credits 8: Lecture 4, Clinical 4.

Prerequisites: CLP 100(N)

Fundamentals of nursing practice are taught through theory, skills and experience. The nursing process is introduced as the organizing framework for the delivery of care. The student is introduced to the concepts of assessment, communication, professional behavior, and meeting the needs of clients across the lifespan.

### **NUR 102: Nursing Care Across the Lifespan**

Credits 10: Lecture 5, Clinical 5.

Prerequisites: NUR 101, ENG 101, BIO 111, PSY 101.

This course reinforces the nursing process as the organizing framework for the delivery of care. The holistic healthcare needs of individuals are explored along with common health problems encountered in each age group. Concepts of teaching and learning and managing care are introduced. Students continue to acquire knowledge through theory, skills and experience.

### **NUR 201: Nursing Care Across the Lifespan II**

Credits 10: Lecture 5, Clinical 5.

Prerequisites: NUR 102, BIO 112, PSY 201

This course emphasizes the utilization of the nursing process for the delivery of care. The holistic health care needs of individuals continue to be explored along with common health problems encountered in each age group. Emphasis is placed on two areas of increasing knowledge; the childbearing family and behavioral health. The focus of this course is on clinical decision making and therapeutic interventions.

### **NUR 210: Pharmacology**

Credits 3

Prerequisites: NUR 102, BIO 112

This course will focus on the principles of pharmacology and the major drug classifications in relation to the treatment of health problems throughout the lifespan. Emphasis will be placed on the knowledge and interventions needed to maximize therapeutic effects and prevent or minimize adverse effects of medications.

### **NUR 202: Nursing Care Across the Lifespan III**

Credits 11: Lecture 5, Clinical 6

Prerequisites: NUR 201, NUR 210, BIO 213.

This course promotes integration of the nursing process for the delivery of care. The holistic health care

needs of individuals continue to be explored along with common health problems encountered in each age group. Emphasis of this course is on collaboration and role transition from student to graduate.

## RADIOLOGIC TECHNOLOGY COURSES

### **CLP 100(R): Introduction to Clinical Practice - Radiology**

Credit 1

Prerequisite: Admission to the Radiologic Technology Program

The course will familiarize health profession students with the College policies, healthcare procedures, and technology. In addition, the course will facilitate the students' transition from the classroom to the clinical area. Emphasis will be placed on introducing the student to equipment and practices specific to the field of radiologic technology.

### **PRO 101: Radiographic Procedures I**

Credits 3

Prerequisites: CLP 100(R)

This course offers the student the fundamentals of radiographic positioning and related terminology. It incorporates the application of anatomy and physiology essential to the practice of radiologic technology. Standard and selected additional radiographic procedures of the chest, abdomen, extremities and the upper gastrointestinal system will be discussed. Image evaluation and critique of these procedures will be covered. Demonstrations and clinical testing will be conducted in the positioning lab.

### **PHY 101: Applied Physics I**

Credits 2

Prerequisites: CLP 100(R) or by permission of the instructor.

A study of atomic theory, principles associated with matter, energy, basic electricity, magnetism, and electromagnetism are included in PHY 101. Students will develop basic electrical circuits and calculate the relationship between potential difference, current and resistance. A study of various radiographic apparatus will be included. Emphasis will be placed on the construction and principles of generators, transformers, rectifiers, x-ray tubes, and controlling components. A discussion of tube rating will be included. The basic schematic x-ray circuit will be studied in detail.

### **CLN 101: Clinical Practicum I**

Credits 4

Prerequisites: CLP 100(R)

During all phases of this program, clinical practicum is used to acquaint the student with the clinical environment and the radiographic equipment in that environment. During all phases of the practicum, the students will perform radiographic examinations. At first, these examinations will be done under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. During CLN 101, students will demonstrate clinical competency on radiography of the chest, abdomen, and upper extremities.

### **PRO 102: Radiographic Procedures II**

Credits 3

Prerequisites: PRO 101, HCS 101, PHY 101, BIO 111, CLN 101

As a continuation of PRO 101 and building upon the foundation of knowledge gained in BIO 111 and BIO 112, this course incorporates the application of anatomy and physiology essential to the practice of radiologic technology. Standard and selected additional radiographic procedures of the vertebral column, anterior neck, bony thorax, and specialty chest and abdomen radiography will be studied. In addition, select radiographic procedures of the urinary and lower gastrointestinal systems will be covered. Image evaluation and critique of these procedures will be discussed.

Demonstrations and clinical testing will be conducted in the positioning lab.

### **PRE 101: Radiographic Exposure and Physics I**

Credits 3

Prerequisites: PRO 101, HCS 101, PHY 101, BIO 111, CLN 101

As a continuation of PHY 101, a study of the production of the x-ray beam, prime exposure factors, filtration, and x-ray interactions with matter will be included. Through discussion and experimentation on energized x-ray units, the students will investigate the prime exposure factors and their effects on the image. Radiation protection for patients and personnel will be included. Creating the image with beam restriction, patient considerations, radiographic grids, film/screen combinations, image processing, digital radiography, and film sensitometry will be included.

### **CLN 102: Clinical Practicum II**

Credits 4

Prerequisites: Prerequisites: PRO 101, HCS 101, PHY 101, BIO 111, CLN 101

During all phases of this program, clinical practicum is used to acquaint the student with the clinical environment and the radiographic equipment in that environment. During all phases of the practicum, the students will perform radiographic examinations. At first, these examinations will be done under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. During CLN 102, students will demonstrate clinical competency on radiography of the upper and lower extremities, as well as three elective studies, and patient transfer.

### **CLN 103: Clinical Practicum III**

Credits 4

Prerequisites: PRO 102, PRE 101, BIO 112, CLN 102

During all phases of this program, clinical practicum is used to acquaint the student with the clinical environment and the radiographic equipment in that environment. During all phases of the practicum, the students will perform radiographic examinations. At first, these examinations will be done under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. During CLN 103, students will demonstrate clinical competency on radiography of the lower extremities, pelvic girdle, ribs, vertebral column, advanced chest studies, fluoroscopy elective and two additional elective studies.

### **PRO 201: Radiographic Procedures III**

Credits 3

Prerequisites: CLN 103, ENG 101, MAT 140

As a continuation of PRO 102, this course incorporates the application of anatomy and physiology essential to the practice of radiologic technology. Standard and selected additional radiographic projections of the skull, facial bones and sinuses will be studied. Demonstrations and clinical testing will be conducted in the positioning lab. In addition, multiplanar anatomy of the head, thorax, spine, abdomen, and pelvis will be investigated with correlation of CT. Students will be introduced to interventional radiographic procedures, heart catheterizations and mammography. Radiographic procedures of the digestive, nervous, urinary and reproductive systems will also be covered. A study of the positioning recommendations and radiographic considerations for contrast studies of these systems will be included. Pediatric imaging and special considerations will be discussed. Image evaluation and critique of these procedures will be covered.

### **PRE 201: Radiographic Exposure and Physics II**

Credits 3

Prerequisites: CLN 103, ENG 101, MAT 140

This course is designed as a continuation of PRE 101. Through discussion and experimentation on energized x-ray units, the students will investigate creating and analyzing the radiographic image. Radiographic density, contrast, detail, and distortion will be studied in depth. Special imaging techniques such as automatic exposure control, mobile radiography, tomography and fluoroscopy will be included. The students will be instructed in computerized and digital imaging and processing of the digital image. Creating exposure charts and solving exposure conversion problems will be included.

### **APC 201: Advanced Patient Care for the Radiographer**

Credits 1

Prerequisites: CLN 103, ENG 101, MAT 140

This course is a continuation of the patient care presented in HCS 101. Specific patient care procedures encountered by radiographers are covered in detail. Pharmacology of emergency medications administered in radiology and other medications commonly encountered in radiology will be presented, among other healthcare topics pertinent to radiology. Presentations in venipuncture and vital signs will be presented and students will demonstrate competency. Students will relate the materials presented to patient care and a career in radiography.

### **MOD 201: Radiographic Supplemental Modalities**

Credits 2

Prerequisites: CLN 103, ENG 101, MAT 140

This course is designed as the introduction to the supplemental radiologic sciences of radiation therapy, nuclear medicine, ultrasonography, computerized axial tomography, digital radiography, magnetic resonance imaging, mammography, and absorptiometry. A discussion of the basic principles, terminology, and equipment used in these fields is included. The students will be given the opportunity to observe and assist technologists working in these areas of the hospital.

### **CLN 201: Clinical Practicum IV**

Credits 4

Prerequisites: CLN 103, ENG 101, MAT 140

During all phases of this program, clinical practicum is used to acquaint the student with the clinical environment and the radiographic equipment in that environment. During all phases of the practicum, the students will perform radiographic examinations. At first, these examinations will be done under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. In the senior year the students will have the opportunity to observe in the supplemental modalities of radiography in addition to the routine diagnostic area. During CLN 201, students will demonstrate clinical competency on radiography of pediatric chest, trauma upper and lower extremities, trauma shoulder, portable chest and abdomen, fluoroscopy elective and three additional elective studies.

### **RQA 201: Radiographic Quality Assurance**

Credits 1

Prerequisites: PRO 201, PRE 201, MOD 201, CLN 201, PSY 101

This course is designed to prepare the student to develop a quality assurance program and to assist the student in the understanding of minor equipment malfunctions and repair. The student will create a quality assurance manual including instructions and documentation logs of all aspects of quality assurance in radiology which may be used to develop a quality assurance program. A study in formulating and charting radiographic technique will be included. Students will be given the opportunity to perform equipment quality control checks and proper processor care in the clinical area.

### **RPB 201: Radiation Protection and Radiobiology**

Credits 2

Prerequisites: PRO 201, PRE 201, MOD 201, CLN 201, PSY 101

This course will include a study of radiobiology with special attention to cellular effects, and early effects vs. late effects of radiation. Discussions on radiochemistry, cell sensitivity, organ effects and radiation risk estimates will be included. A study of the advanced radiographic principles of radiation protection, measurement, and shielding will be presented. Protection of the patient, radiographer, and others in radiology, nuclear medicine, and radiation therapy will be emphasized. ALARA and patient education to minimize radiation exposure will be discussed.

### **PRP 201: Graduation and Registry Preparation**

Credits 1

Prerequisites: PRO 201, PRE 201, MOD 201, CLN 201, PSY 101

This course is designed to prepare students for ARRT examination and employment in the field of radiology. Students will be given the opportunity to take mock registry examinations and review questions with instructors. A review of radiography materials determined by the students will be included. Students will discuss career options, the search for a job in radiography, job applications, resume writing, and interviewing. Emphasis will be placed on professionalism, professional growth, and opportunities for advancement, continuing education requirements, national certification, and state licensing requirements.

### **PTH 201: Pathology and Image Evaluation I**

Credits 1

Prerequisites: CLN 103, ENG 101, MAT 140

A study of the symptoms, diagnosis and treatment of diseases and conditions of the body will be included. Emphasis will be placed on those diseases and conditions which are diagnosed through medical imaging procedures.

### **IMA 201: Image Analysis**

Credits 1

Prerequisites: PRO 201, PRE 201, MOD 201, CLN 201, PSY 101

This course incorporates a thorough discussion and practice of image analysis. The student will evaluate and critique images in various settings. Images will be analyzed based upon radiographic positioning, anatomy demonstration, exposure factors and possible artifacts. The student will be responsible for using correct terminology to describe their findings.

### **CLN 202: Clinical Practicum V**

Credits 4

Prerequisites: PRO 201, PRE 201, MOD 201, CLN 201, PSY 101

During all phases of this program clinical practicum is used to acquaint the student with the clinical environment and the radiographic equipment in that environment. During all phases of the practicum the students will perform radiographic examinations. At first these examinations will be done under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. In the senior year the students will have the opportunity to observe in the supplemental modalities of radiography in addition to the routine diagnostic area. During CLN 202, students will demonstrate clinical competency on radiography of a portable extremity, headwork elective and four additional elective studies, and an orthopedic C-arm procedure. During CLN 202, students will demonstrate clinical competency on patient care activities of taking vital signs, performing venipuncture, care of medical equipment and oxygen administration, sterile field set up, and final radiographic competencies. The final radiographic competencies are indicative of entry-level radiographer performance

## **NUCLEAR MEDICINE COURSES**

Course Descriptions

### **CLP 100(NM): Introduction to Clinical Practice – Nuclear Medicine Technology**

Credits 1

Pre-Requisites: Admission to the Nuclear Medicine Technology Program

The course will familiarize health profession students with the College policies, healthcare procedures, and technology. In addition, the course will facilitate the students' transition from the classroom to the clinical area. Emphasis will be placed on introducing the student to the equipment and practices specific to the field of nuclear medicine technology.

### **NM 120: Nuclear Medicine Physics**

Credits 2

Pre-Requisites: CLP 100(NM)

Nuclear Medicine Physics will include a review of the structure of atoms and molecules, electromagnetic forces, mass/energy conversion, ionization, and excitation. A study of radionuclides will include nuclear structure, stabilities, radioactive series, radioactive decay and conversion laws and decay schemes.

Radioactivity will be studied in terms of the exponential decay law, calculation of the mass of a radioactive sample, specific activity, half-life, and statistics of radioactive decay. The production of radionuclides will be presented with emphasis on methods of production and principles of a generator. Detection of radiation with gas-filled detectors and scintillation detectors will be presented. In-vitro radiation detection will be studied including well-type detectors and liquid scintillation detectors. In-vivo radiation detection will include a study of uptake probes, bone densitometers, gamma cameras, and interfacing with a computer. The gamma camera will include detail on the collimators, crystal, position determining circuit, and display. Positron emission tomography (PET) imaging and hybrid imaging equipment with components will also be covered.

### **NM 130: Radiochemistry and Radiopharmacy**

Credits 3

Pre-Requisites: CLP 100(NM)

This course will cover the structure of the nucleus, radioactive decay, generators, and production of radionuclides. Labeling and characteristics of various radiopharmaceuticals to include radiopharmacology and biodistribution will be presented. Quality control of generators, radionuclides and radiopharmaceuticals will be studied. The design consideration of a Nuclear Pharmacy will be presented. Radiation dosimetry, regulations and protection will be covered. The therapeutic uses of radiopharmaceuticals will be studied. Students will demonstrate competency in the simulated hot lab to include eluting the generator, preparing basic radiopharmaceuticals and drawing patient doses from elution vials.

### **NM 140: Nuclear Medicine Procedures I**

Credits 4

Pre or Co-Requisites: CLP 100(NM)

The student will study all aspects of nuclear imaging related to skeletal, cardiac, respiratory, gastrointestinal, genitourinary, endocrine, nervous, and hematopoietic systems as well as therapy procedures, oncology imaging and infection imaging procedures. The procedures, protocols, instrumentation and radiopharmaceuticals used in nuclear medicine imaging of these systems will be studied in detail. Pathologic conditions imaged in Nuclear Medicine will be presented. In addition, the basics of PET imaging and hybrid imaging will be studied.

### **NM 150: Clinical Practicum I**

Credits 4

Pre-Requisites: CLP 100(NM)

Clinical practice is used throughout the course to acquaint the student with the clinical environment and the nuclear medicine equipment and procedures performed. The student will perform nuclear medicine

examinations during all phases of the clinical practicum. At first, the students will observe and assist the Nuclear Medicine Technologists. The student must demonstrate competency in performing Nuclear Medicine imaging as outlined in the clinical guidelines. As the student progresses through the practicum and gains experience, supervision will be limited as outlined in the handbook providing the student has passed the appropriate progress checks.

### **NM 160: Radiobiology**

Credits 1

Pre-Requisites: NM 120, NM 130, NM 140, NM 150

Radiobiology will begin with a review of radiobiology including linear energy transfer, radiation effects on cell components, cellular response, tissue response, total body response and late effects. Biological effect, equivalent dose and dose equivalent will be discussed along with weighting factors and quality factors. Clinical Nuclear Medicine will be studied in terms of the risks, terminology used, and Nuclear Medicine specifics such as exposure facts, biological variables, carcinogenesis, and genetic risks, risks to the embryo and fetus, and therapeutic use of radionuclides. Occupational exposure will also be studied with emphasis on the basis for maximum permissible dose limits.

### **NM 170: Nuclear Medicine Procedures II**

Credits 2

Pre-Requisites: NM 120, NM 130, NM 140, NM 150

This course is a continuation of Nuclear Medicine Procedures I. More information on positron emission tomography (PET) imaging to include oncology, neurology and cardiology PET imaging will be provided. Acquisition procedures, radiopharmaceuticals, standard uptake values and other quantitative data related to PET imaging will also be covered. Information on new research in the field of Nuclear Medicine Technology will be discussed. Hybrid imaging techniques will be discussed to include PET/CT. Pediatric imaging and imaging considerations for elderly patients will be covered in detail during this course. Students will complete pathology case reviews related to Nuclear Medicine Technology.

### **NM 180: Introduction to Research Methods**

Credits 3

Pre-Requisites: NM 120, NM 130, NM 140, NM 150

This course will cover the basic types of research, research methods and the components of a research study. The course will include conducting a literature search, refining the research problem to be studied and methods of conducting the research. Data analysis techniques will be covered as well as reading and evaluating research articles. Ethical and legal principles of research will be covered as well as information on writing research reports for publication in a clear and concise way. Biostatistics and computer analysis techniques will be included. Important considerations in conducting clinical research will be incorporated. In addition, avoiding bias and statistical errors in research will be covered.

### **NM 190: Clinical Practicum II**

Credits 4

Pre-Requisites: NM 120, NM 130, NM 140, NM 150

Clinical practice is used throughout the course to acquaint the student with the clinical environment and the nuclear medicine equipment and procedures performed. The student will perform nuclear medicine examinations during all phases of the clinical practicum. At first, the students will observe and assist the nuclear medicine technologists. The student must demonstrate competency in performing nuclear medicine imaging as outlined in the clinical guidelines. As the student progresses through the practicum and gains

experience, supervision will be limited as outlined in the handbook, providing the student has passed the appropriate progress checks. This clinical practicum is performed in the diagnostic nuclear medicine department as well as in the PET/CT department.

### **NM 210: Mathematics and Statistics for Nuclear Medicine**

Credits 2

Pre-Requisites: NM 120, NM 130, NM 140, NM 150

This course will cover statistics used in Nuclear Medicine Technology and the healthcare field. Mathematics related to radiation protection, radiopharmaceutical preparation and radionuclide decay will be included. Calculations related to ensuring proper equipment accuracy, precision and set up will be covered. Calculations related to clinical procedures will also be covered. Statistical applications related to equipment precision will be included. In addition, statistics related to clinical data collection and research will be covered.

### **NM 200: Nuclear Medicine Procedures III**

Credits 2

Pre-Requisites: NM 160, NM 170, NM 180, NM 190, NM 201

Information on new research in the field of Nuclear Medicine Technology will be discussed. Molecular imaging and advances in Nuclear Medicine Technology procedures will be covered. Students will be writing papers in APA format and presenting the information as well as completing pathology case reviews related to Nuclear Medicine Technology or PET imaging. A discussion of cultural diversity to include imaging considerations will be included. Problem solving of interesting and difficult cases encountered in the clinical setting will be included with resolutions and constructive feedback given. Ethical and legal issues related to patient care will be reviewed.

### **NM 205: Clinical Practicum III**

Credits 4

Pre-Requisites: NM 160, NM 170, NM 180, NM 190, NM 201

NM 205 is a continuation of NM 190. Clinical practice is used throughout the course to acquaint the student with the clinical environment and the nuclear medicine equipment and procedures performed. The student will perform nuclear medicine examinations during all phases of the clinical practicum. At first, the students will observe and assist the nuclear medicine technologists. The student must demonstrate competency in performing nuclear medicine imaging as outlined in the clinical guidelines. As the student progresses through the practicum and gains experience, supervision will be limited as outlined in the handbook, providing the student has passed the appropriate progress checks. This clinical practicum is performed in the diagnostic nuclear medicine department as well as in the PET/CT department.

### **NM 220: Radiopharmacy and Pharmacology II**

Credits 3

Pre-Requisites: NM 160, NM 170, NM 180, NM 190, NM 201

This course will include adverse reactions and altered biodistribution of radiopharmaceuticals. An overview of the principles of molecular imaging including various probes used and radiopharmaceutical design will be discussed. This course will include the production of PET radionuclides and radiopharmaceuticals. Regulations and specific uses of PET radiopharmaceuticals will also be included. Pharmacology of various radiopharmaceuticals and pharmaceuticals will be covered including the adverse reactions. The generators used in PET imaging, their characteristics and quality control will be studied. Students will demonstrate

competency in the simulated hot lab to include eluting the generator, preparing more complex radiopharmaceuticals and drawing patient doses from elution vials. Students will demonstrate the ability to account for decay and pediatric populations when drawing patient doses.

#### **NM 240: Computers and Medical Informatics**

Credits 2

Pre-Requisites: NM 160, NM 170, NM 180, NM 190, NM 201

This course reviews processing and display of images including filters used in processing single photon emission computed tomography (SPECT) data. An overview of the four major quantitative cardiac perfusion software packages, as well as Gated acquisition and processing considerations are included in this course. Data processing programs used will also be covered. Computers used in the hot lab and pharmacy will also be included. This course will also cover computer networking, digital imaging and communications in medicine (DICOM) and picture archiving and communications systems (PACS). Additionally included will be the health insurance and portability act (HIPAA) and other legal issues related to medical informatics, charting and documenting patient information. Students will complete a computer lab as part of this course which will be completed at a clinical site.

#### **NM 230: Nuclear Medicine Procedures IV**

Credits 3

Pre-Requisites: CT 100, CT 110, NM 200, NM 205, NM 220, NM 240

Scheduling and clerical issues specific to nuclear medicine will be reviewed. Quality Assurance procedures will be demonstrated with rationale provided. The budgeting and purchasing procedures will be discussed. Regulating agencies and requirements for compliance will be studied. A discussion of good public relations with rationale will be included. The managed care environment will also be studied. This course will also provide a brief overview of management styles, types of management and marketing of nuclear medicine. A review of HIPAA and radiation safety requirements will be given. This course will cover an overview of emerging technologies, such as optical imaging and bioluminescence. In addition, factors affecting the future of healthcare will be reviewed. The course will include information about the changing healthcare environment. This course will also review ethical and legal considerations for Nuclear Medicine Technologists.

#### **NM 260: Registry Review**

Credits 1

Pre-Requisites: CT 100, CT 110, NM 200, NM 205, NM 220, NM 240

This course will review content covered in nuclear medicine and PET imaging as well as physics and radiopharmacy. In addition there will be several tests and comprehensive exams given during this course to prepare the students for the national registry exams.

#### **NM 270 NM/CT Clinical Practicum IV**

Credits 5

Pre-Requisites: CT 100, CT 110, NM 200, NM 205, NM 220, NM 240

NM 270 is a continuation of NM 205. This course is a combination of CT and NM clinical practice for the Nuclear Medicine Technology student. Clinical practicum will be used to acquaint students with the clinical environment and the Computed Tomography equipment in that environment. In all phases of the practicum students will perform CT examinations. At first, these examinations will be performed under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. Students will begin to observe,

and then perform the variety and volume of studies required to apply to take the ARRT CT certification examination. All the studies required to take the ARRT CT certification exam and the appropriate number of clinical hours as outlined in the syllabus must be completed to successfully complete this course. Students having remaining nuclear medicine competencies to complete must complete them in this semester. Students will gain additional practice throughout the course to enhance the student's clinical skills and reinforce academic material in nuclear medicine and PET procedures. The student will perform the final competencies required to graduate from the Nuclear Medicine program. Students will gain efficiency in functioning as a part of the Nuclear Medicine department while being supervised as outlined in the student handbook.

#### **NM 275 Clinical Practicum IV-a (for CT certified technologists)**

Pre-Requisites: NM 200, NM 205, NM 220, NM 240

NM 275 is a continuation of NM 205 for nuclear medicine students who are already nationally certified in computed tomography. This course includes 90 clinical hours in nuclear medicine and PET/CT. Students having remaining nuclear medicine competencies to complete, must complete them in this semester. Students will gain additional practice throughout the course to enhance the student's clinical skills and reinforce academic material in nuclear medicine and PET procedures. The student will perform the final competencies required to graduate from the Nuclear Medicine program. Students will gain efficiency in functioning as a part of the Nuclear Medicine department while being supervised as outlined in the student handbook.

### COMPUTED TOMOGRAPHY COURSES

#### **CT 100: Multiplanar Anatomy**

Credits 3

Prerequisites: Admission to the CT or NM Programs or by permission of the director.

This multiplanar anatomy course will cover cross sectional anatomy to include the head, neck, chest, abdomen, pelvis, spine and extremities. Axial views of all of these areas with major bones, organs and vascular structures identified will be included. In addition, pathology will be covered as it relates to its presentation on axial images. This is an instructor supported fully online course.

#### **CT 110: Patient Care in CT**

Credits 2

Prerequisites: Admission to the CT or NM Programs or by permission of the director.

This course will cover the patient preparation instructions that are necessary to perform a CT scan. IV procedures and assessment and monitoring of the patient will be reviewed. In addition, the types of contrast, special considerations with the use of contrast and the adverse reactions related to contrast administration will be covered. The technical factors related to radiation safety and ways to minimize the patient dose will be taught. Education on the special circumstances such as pediatric and pregnant patients will also be included. This is a hybrid course which is conducted primarily an online course with limited in-person classroom instruction.

#### **CT 120: CT Procedures**

Credits 2

Prerequisites: CT 100, CT 110

This course in CT procedures will include instruction on positioning the patient, setting up a scout view,

setting up the equipment to include slice thickness, pitch, rotation factors and other technical aspects of acquisition set up. When and how contrast is used to acquire the study and what dose will be used will be discussed. The various types of reconstruction for CT images will be taught. In addition, special CT procedures such as CTA and biopsies will be included. Reviewing images for technical quality and the assessment of the need for additional views will also be included in this course.

### **CT 130: CT Physics and Instrumentation**

Credits 2

Prerequisites: CT 100, CT 110

This course will include the basics of x-ray production, the nature of x-rays and the interaction with matter. The construction of the CT scanner and the evolution from the early CT units to modern day units will be discussed. Image processing and display to include reconstruction, data management and review of images to determine quality and recognize artifacts will also be covered. Quality control of the CT scanner will also be included in this course.

### **CT 140: CT Clinical Practicum I**

Credits 3

Prerequisites: CT 100, CT 110

Clinical practicum is used to acquaint students with the clinical environment and the Computed Tomography equipment in that environment. In all phases of the practicum, the students will perform CT examinations. At first, these examinations will be performed under direct supervision. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks. Students will begin to observe and perform the variety and volume of studies required to apply to take the ARRT CT certification examination.

### **CT 150: CT Clinical Practicum II**

Credits 3

Prerequisites: CT 140

CT 150 is a continuation of CT 140. Utilizing the knowledge, skills, and abilities obtained in CT courses and clinical practicum, students will complete the CT procedures required to apply to take the ARRT CT certification examination. As the students progress through the practicum and gain experience, supervision will be limited providing the student has passed the appropriate progress checks.

ada statement

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If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by Maine College of Health Professions, you must register with the disability services coordinator. Call (207) 795-2840 (TTD 207-741-5667) to make an appointment with the disability services coordinator.

Further information about services for students with disabilities and the accommodation process is available upon request at this number.

### **Title IX**

MCHP is committed to providing a learning environment which is free of violence and harassment based on sex or gender. If you are having problems with sexual harassment, stalking, domestic/dating abuse or sexual misconduct/assault, please speak up. Please call (207)795-2840 to make an appointment with the Title IX Coordinator or speak with any MCHP faculty or staff to assist you.

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