



University of Massachusetts-Lowell



Radiation Safety Committee Charter

Mission Statement

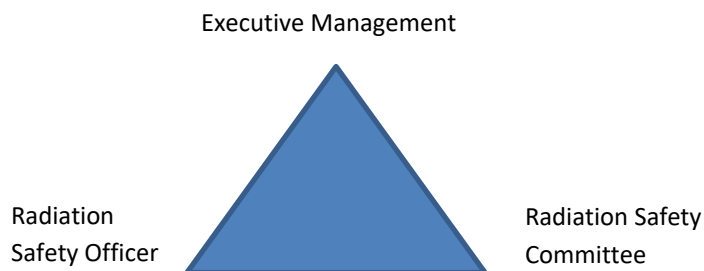
The University of Massachusetts Lowell (UMass Lowell) Radiation Safety Committee (RSC) is a diverse team of experienced professionals providing services and oversight regarding ionizing and non-ionizing radiation safety to ensure a safe and healthy work environment for students, faculty, staff, and community.

In keeping with that mission, The UMass Lowell RSC is responsible for the establishment of policies and review of matters and practices related to occupational and environmental radiation safety at the university. This charter describes the organization, roles and responsibilities of the committee, its subcommittees, its officers and membership, and the authority and procedures the committee follows to maintain compliance with all applicable federal, state and local requirements.

Regulatory Oversight and Licenses

The use of radioactive materials and radiation emitting devices at the University of Massachusetts Lowell (UMass Lowell) requires specific licenses issued by Federal or State authorities. Federal and State regulations stipulate the requirements for the effective management of radiation safety by the university. The university adheres to the principle of effective radiation safety management with three distinct interactive elements: an individual responsible for implementing the radiation safety program (the radiation safety officer or RSO), a committee to develop, promote, and evaluate a quality radiation safety program (the radiation safety committee or RSC), and an executive management individual who is ultimately responsible for the radiation safety program.

Executive Management and Organization Chart



The UMass Lowell radiation safety program is based on the 'management triangle' as described in NUREG-1516. The concept is to emphasize the three primary responsible entities for radiation safety program management and to demonstrate that no one element is more important than another. However, executive management has the ultimate responsibility for the radiation safety program. The Institutional Official responsible for oversight of the Radiation Safety Committee is the Chancellor of UMass Lowell. The Radiation Safety Committee reports to the Chancellor through the Associate Vice Chancellor for Research, the Chancellor's Designee (CD).

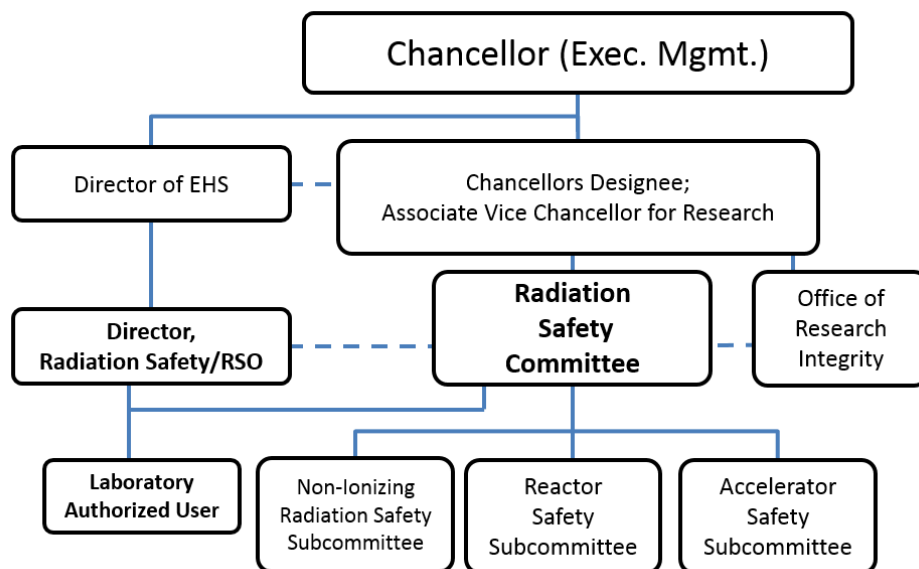


Figure 2. Institutional Organizational Chart Illustrating Management of Radiation Safety. Legend- solid lines indicate a reporting function, dotted lines indicate cooperation and communication.

Roles and Responsibilities

A. Radiation Safety Committee (RSC)

The RSC is committed to the regulatory requirement of ALARA, an acronym for "as low as (is) reasonably achievable," as defined in Title 10, Section 20.1003, of the *Code of Federal Regulations*. The Committee expertise provides a mechanism for dissemination of information to the various users. The RSC works with executive management and the RSO to implement the radiation safety program. The RSC has been granted the necessary authority to fulfill its purpose of overseeing the radiation safety program.

B. Radiation Safety Committee Membership

Due to the highly technical nature of the subject matter involved in the scope of this committee and its sub committees, membership is restricted to those persons with experience in radiation safety, general law or in the use of radioactive materials and/or ionizing or non-ionizing radiation emitting machines. The RSC membership represents all radiological expertise or skill sets that complement the RSC mission needed on our campus and reflects a diversity of expertise and knowledge required to perform its

oversight mission. Each area of use under the various licenses is represented on the RSC. All RSC members are appointed by the CD.

The RSC is, at a minimum, comprised of the following individuals:

- One member representing Executive Management (Chancellor designee)
- The Radiation Safety Officer
- One additional member representing senior management, defined as a dean or a person reporting to the Chancellor or the Vice Provost
- One member representing UMass Lowell staff and/or faculty radiation researchers
- One additional UMass Lowell staff and/or faculty members who serve on one of the following:
 - Reactor Safety Subcommittee (RSSC)
 - Accelerator and X-Ray Safety Subcommittee (AXSS)
 - Non-ionizing Radiation Safety Subcommittee (NIRSSC)

C. Radiation Safety Committee Responsibilities:

The Committee is responsible for ensuring that an adequate safety program is developed, implemented, and supported. This responsibility is accomplished through delegation of authority to various persons and subcommittees with specific expertise in areas under their purview.

The RSC has the following responsibilities:

- Reviews procedures and establishes policies to keep the university in full compliance with all radiation protection regulations ordered by the state and federal agencies.
- Reviews regulatory inspection reports, radiation safety training programs, plans for abating radiation hazards, and any complaints regarding radiation safety.
- Reviews emergency response procedures and investigation of accidents involving radioactive material.
- Authorizes users of radiation sources and radioactive materials.
- Reviews annual radiation dosimetry results.
- Reviews the storage, transport, processing and disposal of radioactive materials and the environmental release of radioactive effluents.
- Provides technical advice, assistance and management-level support to the RSO and the Department of Environmental Health and Safety in matters regarding radiation safety, accident prevention and radiation exposure control.
- Provides input to other Safety and Health Committees on campus for non-radiological safety issues or hazards related to ALARA.
- Establishes working groups, subcommittees or appoints temporary ad hoc members to the Committee, as necessary, to effectively carry out its duties.

D. Radiation Safety Committee (RSC) Meetings

The RSC meets at least quarterly, or more often as required, to identify and review substantive issues related to radiation safety. A quorum consists of one member more than half the members (simple majority) of the standing committee membership and is required for any meeting to be deemed an official

meeting or for any meeting actions to be considered binding. Committee members participating by teleconference are considered “present” and their vote is counted. A simple majority vote (at a meeting that has a quorum) is required to approve or adopt a motion that has been proposed and seconded. The RSO and a representative of executive management must be present as part of the quorum. Meetings may be requested by any Committee Member.

An administrator for the RSC will be appointed by executive management and will notify members of any upcoming meetings, prepare agendas, disseminate materials to members at least five working days before the meeting and record meeting decisions. Individual members may submit agenda items to the administrator for the next meeting. Meeting minutes are prepared by the administrator and disseminated to all members for review and comments within 30 days after the meeting. When a final action is not possible at a formal meeting, further information may be disseminated to all members electronically and a simple majority vote by email is permitted.

Conflict of Interest Disclosure

The meeting agenda will always include an item titled "identification of conflict of interests" and the **Chair shall ask members present to disclose any conflict of interest.** A conflict of interest must be disclosed at the beginning of any meeting or before review of any documents to the Committee Chair or to the Director of Research Integrity to:

- ensure the responsible conduct and integrity of decisions made by the Committee;
- protect the Committee membership and the University from unnecessary and avoidable litigation and;
- ensure that committee membership complies with agreements entered into with third-party funding organizations for whom the committee approves facilities, protocols, activities or research projects.

Committee members are obliged to disclose, as soon as it comes to their attention, any conflict of interest or potential conflict of interest. If a committee member is unaware of any conflict of interest or potential conflict of interest at the time they sit in a meeting in which they later discover they are in a conflict situation, they should let the Chair of the Committee or the Director of Research Integrity know immediately once the conflict comes to, or is brought to, their attention. If a committee member is in any doubt about whether or not they are in a potential conflict situation, they must state this to the committee members at the commencement of the meeting.

Clarification of Conflict of Interest

A conflict of interest is considered to exist when a committee member is:

- affiliated with any organization, company, venture or other body that involves a direct financial interest or benefit, directly or through relatives by blood or marriage, in the subject matter or materials of a protocol or registration for review by the committee;
- directly involved in the research subject matter under review by the committee;
- related, by blood or marriage, or a business partner of a person who is a researcher undertaking a protocol or authorization under review by the committee;

- a research competitor or has a personal conflict with the project or the investigators and therefore could be perceived as having a potential bias.

E. RSC Member Roles

RSC Chair

The RSC chairperson is appointed by the CD. The Chair should be an individual of appropriate expertise (faculty or staff) and appropriate knowledge of radiation safety issues, good leadership abilities, authority and credibility by virtue of their position within the university, and a desire to serve as chairperson. The RSO shall not be appointed as the chairperson of the Committee. The committee and its chairperson represent executive management in the formulation of policy for the radiation safety program; therefore, the chairperson is expected to guide the committee's agenda.

RSC Vice-Chair

The RSC Vice-Chair is an individual who can serve in the capacity as chair in the absence of the current chair or if the chair has a conflict of interest. The individual can be selected through consultation with the current chair, RSO, and Director of Research Integrity.

RSO

The primary responsibility of the Radiation Safety Officer is to implement the radiation safety program with the assistance and support of the RSC and management. The highest priority for the RSO is to ensure day-to-day operations are conducted to adequately protect public health and safety and to maintain exposures ALARA. In addition to administering the Radiation Safety program, the Radiation Safety Officer reviews and recommends approval of all applications to use radiation sources. This approval is considered to be in effect subject to review by the RSC.

F. Subcommittee Oversight

Subcommittees that report to the RSC are the Reactor Safety Subcommittee (RSSC), the Accelerator and X-Ray Safety Subcommittee (AXSS), and the Non-ionizing Radiation Safety Subcommittee (NIRSSC). All subcommittee decisions are reported to the RSC via minutes or verbal presentation at RSC meetings.

Reactor Safety Subcommittee (RSSC)

The purpose of the RSSC is to provide oversight with respect to operation of the reactor to ensure operations consistent with the safety of personnel and the public and with the requirements of the facility's operating license. The committee shall be comprised of at least five (5) members including the Reactor Supervisor (RS), the RSO, and at least two faculty members from the engineering or science disciplines. Members are selected to provide proficiency in all aspects of reactor safety and to provide expertise or qualities which the RSC feels are important to the effective functioning of the RSSC. The members will elect a chairperson by majority vote and the individual must have no responsibility for operation of the reactor. An Alternate Chair will be selected to carry out the RSSC's responsibilities in the absence of the Chair. The RSO shall be considered to hold a position outside of line responsibility for reactor operations and may serve as alternate chairperson if so designated by the RSSC. The RSO shall serve as Secretary of the RSSC.

The RSSC meets at least once per calendar year, or more often as required, to identify and review substantive issues related to reactor safety. The Chair of the RSSC or designee provides a summary of the meeting minutes to the RSC as requested. RSSC decisions are considered binding unless overturned or otherwise negated by the RSC.

Specific responsibilities of the RSSC include, but are not limited to:

- Conduct the annual reactor Audit as described in Reactor Technical Specifications 6.2.4
- Review and approval of normal, routine, special and emergency operating and maintenance procedures and records;
- Review and approval of proposed tests and experiments using the reactor facilities in accordance with technical specifications;
- Review and approval of proposed changes to the facility systems or equipment, procedures, or operations;
- Determination of whether a proposed change, test, or experiment constitutes an un-reviewed safety question requiring a change to Technical Specifications or the facility license;
- Review of all violations of the Technical Specifications, NRC regulations, and significant violations of internal rules or procedures, with recommendations for corrective action to prevent recurrence;
- Review of the qualifications for competency of the operating staff.

Accelerator and X-Ray Safety Subcommittee (AXSS)

The purpose of the AXSS Subcommittee is to review all aspects of safety in and around the accelerator and x-ray facilities. The AXSS is comprised of at least five members. The membership includes as a minimum the Radiation Safety Officer, at least two senior scientific staff members, and other members selected to provide expertise or qualities that the RSC feels are important to the effective functioning of the AXSS. The members will elect a chairperson by majority vote. The RSO serves as Secretary for the AXSS. The AXSS Chair provides a written or electronic report of all activities to the RSC on a bi-annual basis.

The AXSS reviews all safety aspects of accelerator and x-ray facilities to ensure operations are safe and consistent with applicable UML, State and Federal guides and regulations.

Specific responsibilities include, but are not limited to

- review and approval of normal, routine, special and emergency safety procedures;
- review and approval of proposed changes to the facility systems or equipment, procedures, or operations that could affect operations safety;
- review of qualifications and competency of the Van-de-Graaff and X-ray facility operating staff to ensure retention of quality staff.

If in the event the AXSS requires additional expertise, a working group can be assigned, an expert recruited to assist, or ad hoc members temporarily asked to provide expertise to effectively carry out the AXSS duties.

Non-ionizing Radiation Safety Subcommittee (NIRSSC)

The purpose of the NIRSSC is to review all safety aspects of laser and other non-ionizing radiation sources to ensure operations are safe and consistent with applicable UML, State, and Federal guides and regulations. The committee shall be comprised of at least five (5) members including the Laser Safety Officer (LSO), the Radiation Safety Officer, and at least two senior scientific staff members with experience and knowledge in the field of non-ionizing radiation safety. The members will elect a chairperson by majority vote. The LSO serves as Secretary of the NIRSSC. The NIRSSC chair provides a written or electronic report of all activities to the RSC on a biannual basis. All decisions of the NIRSSC are considered binding unless overturned or otherwise negated by a decision of the RSC.

Specific responsibilities include, but are not limited to the following:

- Review and approval of normal, routine, special and emergency safety procedures
- Review and approval of proposed changes to the facility systems or equipment, procedures, or operations that could affect operational safety
- Compliance with applicable Federal, State, local and UML standards and regulations

If in the event the NIRSSC requires additional expertise, a working group can be assigned, an expert recruited to assist, or ad hoc members temporarily asked to provide expertise to effectively carry out the NIRSSC duties.

G. Radiation Safety Subcommittee Meetings

A quorum consists of one member more than half the members (simple majority) of the standing committee membership for any meeting to be deemed an official meeting or for any meeting actions to be considered binding. Committee members participating by teleconference are considered “present” and their vote is counted. A simple majority vote (at a meeting that has a quorum) is required to approve or adopt a motion that has been proposed and seconded.

The RSO must be present as part of the quorum and will serve as secretary. Meeting minutes are recorded and kept on file for review by the RSC. The RSC has the authority to overturn any Subcommittee decisions. Subcommittee members are appointed by the RSC, except the RSSC (members are appointed by the Chancellors Designee). Within each subcommittee, a Chair is selected by the members. Subcommittee decisions are made and can be acted upon at each Subcommittee meeting. Meetings may be requested by any Committee Member.

The secretary will notify members of any upcoming meeting, prepare agendas, disseminate materials to members and record meeting decisions. Individual members may submit agenda items to the secretary for the next meeting. Meeting minutes are prepared by the secretary and disseminated to all members for review and comments. When a final action is not possible at a formal meeting, further information may be disseminated to all members electronically and a simple majority vote by email is permitted.

Revisions to the Charter

Revision 1: Initial Approval of document 7-1-14

Revision 2: Minor edits. – Pg. 3. Under subpart B. Added the text (RSSC), (AXSS), and X-Ray to the subcommittees names. Added revisions to the footer (RSC reviewed on 9-25-14)

Revision 3: Minor edits – chancellor’s designee change throughout, remade Figure 2 to reflect structure change (RSC reviewed on 9-11-18)

Revision 4: altered the term limits for the Chair, vice chair roles, mission statement, and changed the reporting structure to reflect the new designee and Office of Research Integrity (RSC reviewed on 3-19-2020)

Revision 5: updated RSSC to reflect updates from the new reactor license. Removed the subcommittee requirement to annually elect a chairperson (RSC reviewed on 3-14-2022)