Worksheet for thesis-based M.S. in chemistry (research-based)
The M.S. degree offers specialization in analytical, inorganic, organic, physical, or biological
chemistry, with cross-disciplinary activity encouraged. It is a 24 credit-hour program. See the
departmental website for more description on the required courses. The core curriculum involves
12 hours consisting of two courses from each of two primary focus areas of advanced chemistry.
The remaining hours can come from other graduate chemistry courses or from advanced courses
in other disciplines. Thesis research (6 hours) is also required.

Core curriculum (12 hrs)
A core curriculum (12 hrs total) consisting of 2 courses from each of the 2 primary focus areas (6 hrs from each area)

1. Synthesis & Materials Chemistry
   - CHEM 5160 Advanced Synthetic Chemistry (3)
   - CHEM 5400 Organic Spectroscopy (3)
   - CHEM 5440 Bioorganic Chemistry (3)
   - CHEM 5450 Advanced Organic Chemistry (3)
   - CHEM 5460 Synthetic Organic Chemistry (3)
   - CHEM 5470 Medicinal Chemistry (3)
   - CHEM 5500 Inorganic Chemistry (3)
   - CHEM 5550 Organometallic Chemistry (3)
   - CHEM 5560 Solid State Chemistry (3)
   - CHEM 5590 Special Topics - Inorganic (3)
   - CHEM 5800 Nanomaterials (3)
   - CHEM 5850 Polymer Chemistry (3)

   - CHEM 5150 Statistics for Chemical Research (3)
   - CHEM 5170 Advances in Analysis and Modeling of Chemical Systems (3)
   - CHEM 5200 Analytical Chemistry 2 (3)
   - CHEM 5250 Bioanalytical Methods (3)
   - CHEM 5260 Analytical Separations (3)
   - CHEM 5270 Electroanalytical Chemistry (3)
   - CHEM 5280 Chemical Sensors (3)
   - CHEM 5290 Special Topics - Analytical (3)
   - CHEM 5330 Advanced Physical Chemistry (3)
   - CHEM 5340 Advanced Thermodynamics (3)
   - CHEM 5350 Colloids and Interfacial Chem (3)
   - CHEM 5370 Computational Chemistry (3)
   - CHEM 5390 Special Topics - Physical (3)
   - CHEM 5450 Advanced Organic Chemistry (3)
   - CHEM 5570 Group Theory and Spectroscopy (3)
   - CHEM 5700 Environmental Chemistry (3)
   - CHEM 5800 Nanomaterials (3)

List 2 of the courses (course #) you have taken from in the synthesis/materials core:

1) ________  2) ________  (6 hrs)

List 2 of the courses (course #) you have taken from in the analytical/physical methods core:

1) ________  2) ________  (6 hrs)
**Chemistry Electives**: must be 6 hrs or more. List the other chemistry courses you have taken along with the total # of hrs. Most students will take chemistry courses and these must be 5000-level or higher. The electives can also be fulfilled by taking 4000-level or higher courses in other disciplines such as biology, math/computer science, and engineering. This needs to be approved by the student’s committee.

1) __________  2) __________  3) ____________ (other classes, if needed)

# of chemistry elective hrs ________ (should be 6 or more hrs)

**Thesis Research.** You should take 6 hrs of thesis research (CHEM 5990). This is usually done in 3 hr increments over the course of 1 year. This should only be taken if you are finishing our program with a thesis-based M.S. degree. Do NOT take this if you want to transition into the Ph.D. program. These are graded IP (in progress) until your last semester, where an S or U grade is assigned.

Semester(s) that CHEM 5990 was taken:  1) __________  2) __________

# hrs ________ (should = 6 hrs)

**Special Study for Examinations.** You should sign up for CHEM 5950 for 0 credit hours in your last semester (the semester you wish to graduate).

Semester that CHEM 5950 was taken __________ # hrs ________ (must be 0)

**Total # of hrs __________ (should be 24 or more)**