1. NJIT Strategic Plan Objective:

Develop a core of nationally recognized programs.

a) **Build three programs to national prominence by 2008.**

b) Strengthen by 2005 three niche areas with high potential for NJIT and the State of New Jersey.

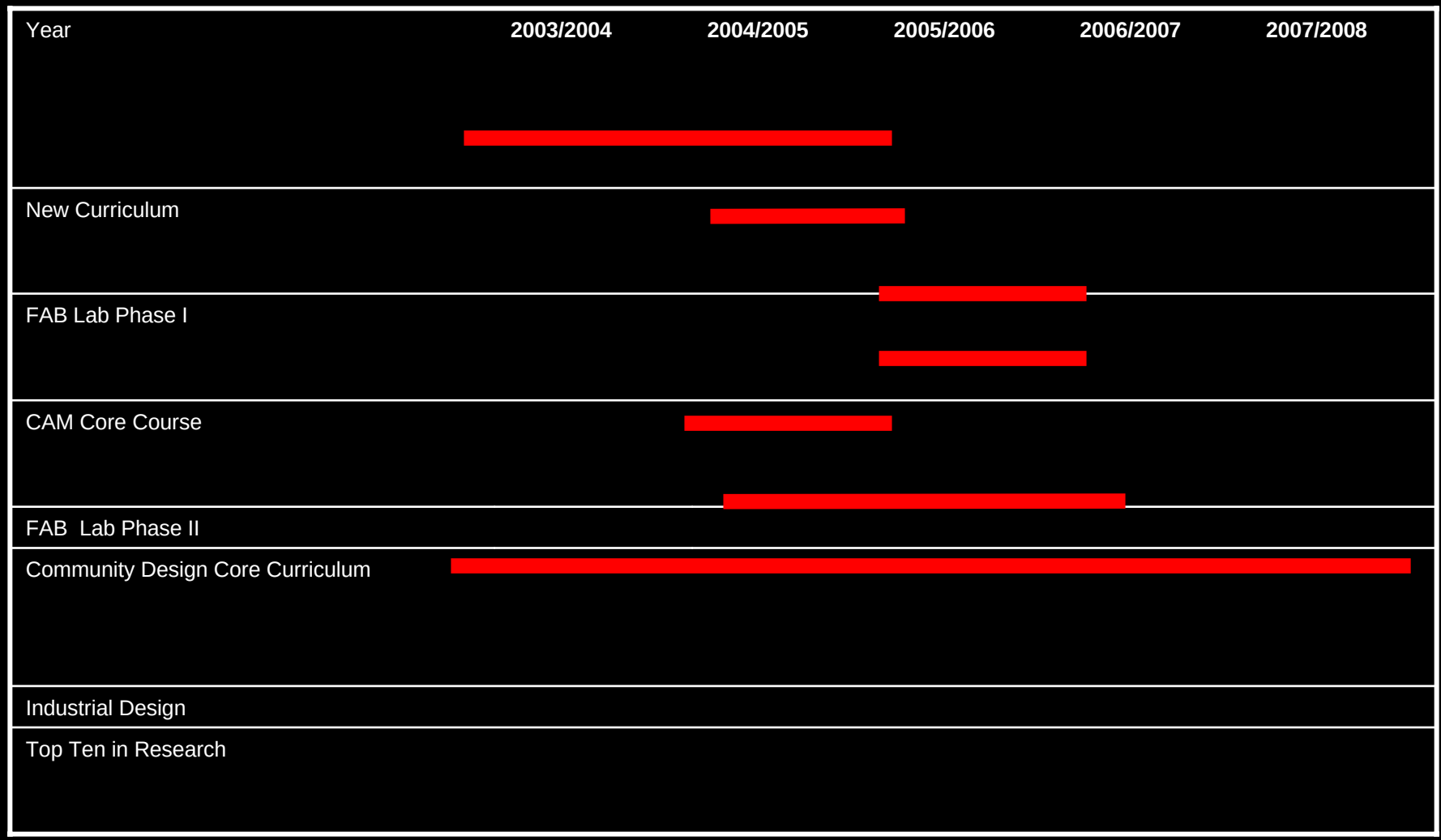
NJSOA: Strategic Tactics

1. Redefinition of Foci:
    - *CAD/CAM*
    - *Design of Communities*
2. Curriculum Development
3. Creation of FAB LAB
4. Hiring of Faculty
5. Top 10% in Research
6. New Program in Industrial Design

NJSOA Strategic Initiatives: Context

- Rapidly changing job market
- Outsourcing
- Expanding role of design
- Dramatic advancements in production and fabrication processes
- Increased complexity in professional services and expertise
- Changes in architectural thought, practice and communication

Time Line for NJSOA Strategic Initiatives



Characteristics of Graduates for the 21st Century

Attitudes

- Self-reliant
- Self-motivated
- Self-disciplined
- Self-Assessing
- Adaptable
- Responsible for educational outcome

Knowledge

- Design Process
- Contemporary design theory and practice
- Framework for codifying new knowledge
- Cultural context for design
- Building systems and techniques
- Areas of specialization
- Entrepreneurial strategies

Skills

- Creative and innovative approach to design
- Dynamic decision making
- Communication
- Interdisciplinary and Teamwork
- Risk Assessment
- Research Competency

2. Curricular Implications

Present Curriculum

- Professional focus
- Design restricted to Architecture

- Emphasis on application
- Skill based studios

- Implicit objectives and Criteria
- Criticism and Evaluation by Teacher
- Traditional communication

- Traditional documentation
- Individual Efforts
- Portfolio of work at end of study

- Courses in 3 and 5 credit hour increments
- Studio and non-studio courses sequenced but not linked

Revised Curriculum to Include

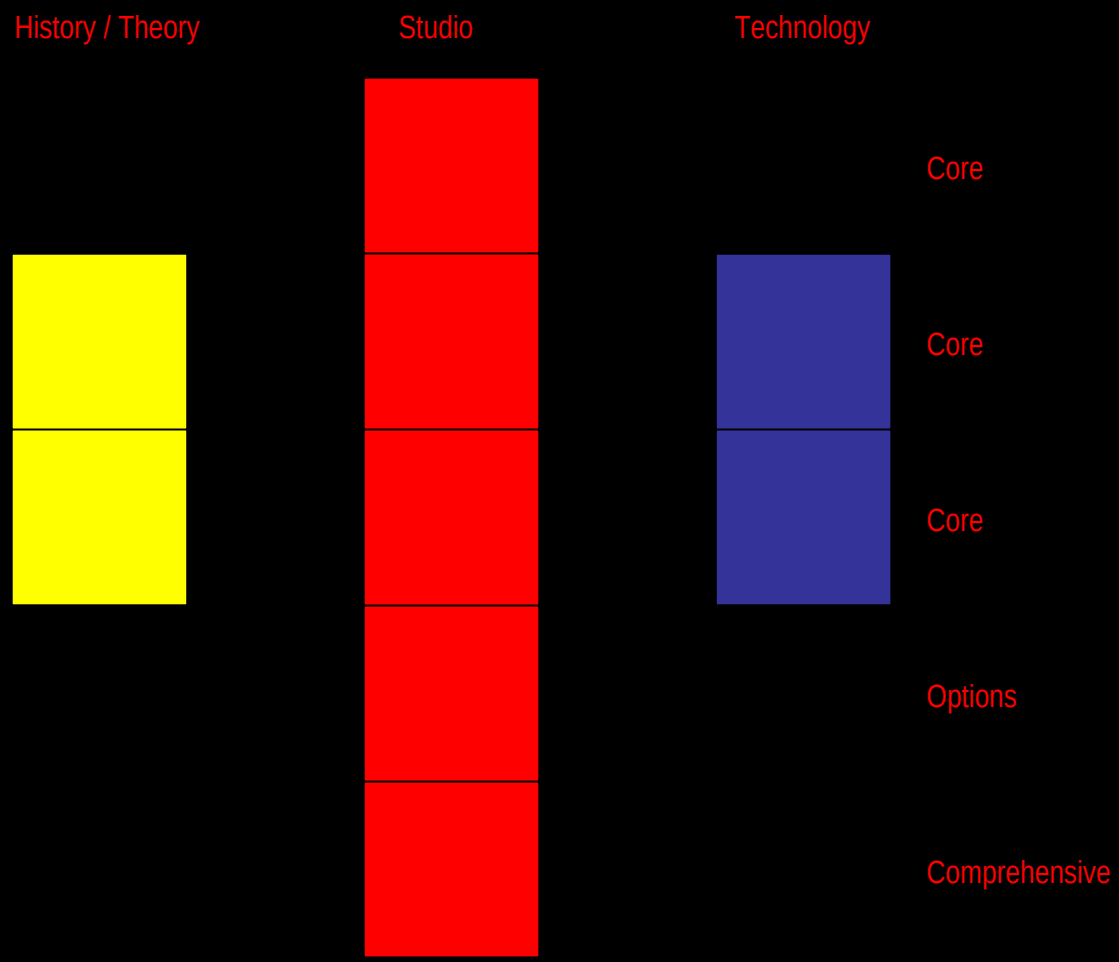
- Entrepreneurial focus
- Design to include macro/micro, from large-scale planning to small products
- Emphasis on principles
- Emphasis on knowledge-based studio

- Explicit objectives and criteria
- Self-assessing criticism and evaluation by student with teacher
- Digital archive of work product in web-based format

- Parametric documentation
- Team efforts
- Continuous portfolio throughout course study

- Courses divided into 2, 3 or 4 modules for differentiated teaching time allocation
- Studio and non-studio courses linked Studios create need to know for non-studio courses

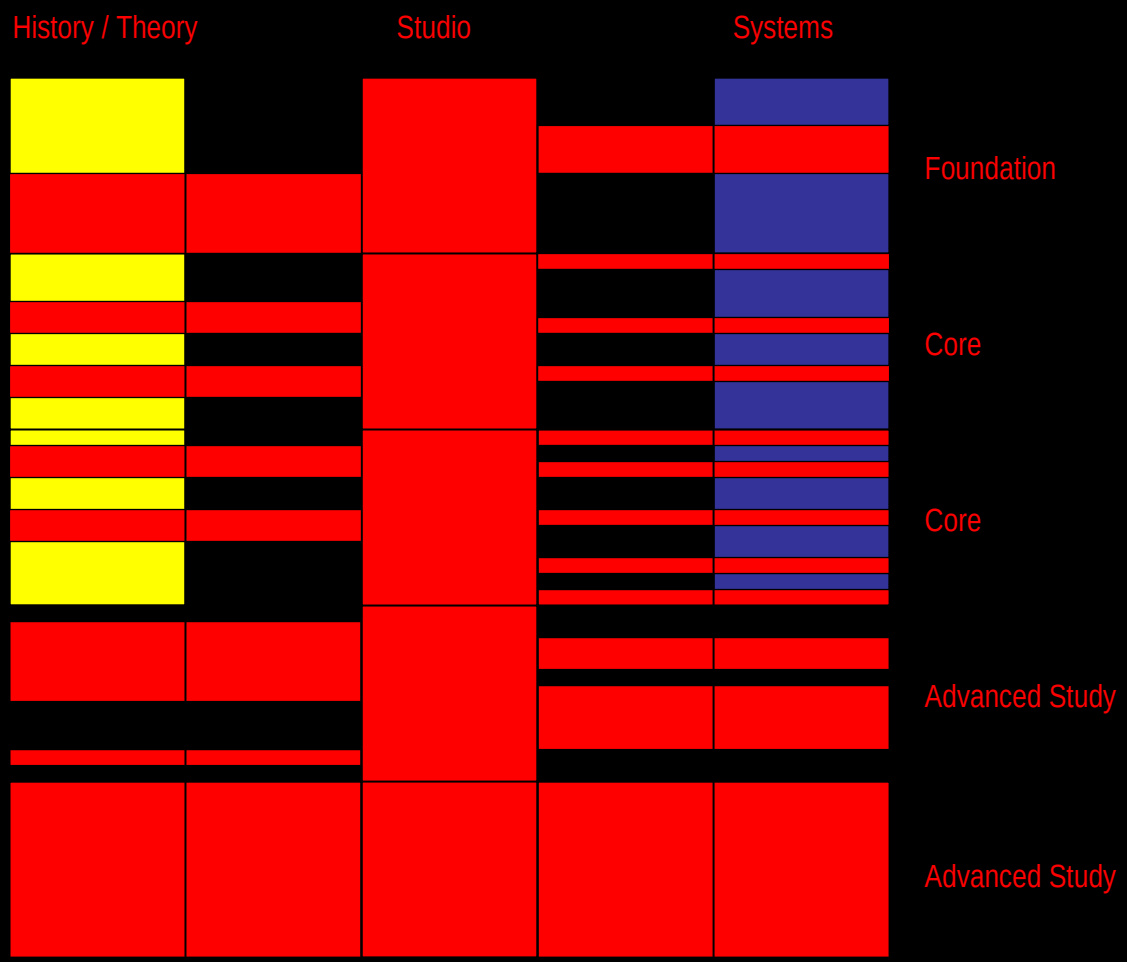
NJSOA: Present Curriculum



Core courses sequenced, but not linked to Studio

NJSOA Curriculum Initiative

Structure of Proposed Curriculum



Core courses linked to studio….Studios create the need to know

Salient Points of the New NJSOA Curriculum

- Change focus from teaching to learning.
- Student centered curriculum – self-assessment/self criticism/self reliance: mandatory journal.
- Web-format for all student deliverables– continuous portfolio.
- Direct links between studio teaching and non-studio courses.
- Complete revamping of all courses including technology, history and theory as well as professional practice.

Salient Points of the New NJSOA Curriculum Cont'd

- Change from 3 credit hours per course to learning modules which allows for a more differentiated allocation of teaching time.
- Creating the need to know in studio courses. Studio problems can then set the pedagogical preconditions for effective learning and for the codification and integration of knowledge.
- Expansion of Design role to include large scale planning as well as the design of products and intellectual property.

3. The NJSOA FAB LAB

- Installation of basic equipment.
- Parametric design, fast prototyping and flexible manufacturing.
- Training of faculty.
- Two experimental studios (Fall ’04)
- School-wide access to FAB LAB (Spring ’05).

4. Hiring of Faculty

- Augment tenured/tenure track faculty.
- Expansion of management capacity.
- Transition planning (5-10 years).

Faculty:

	Female	Male	Total No.
Distinguished Professor		1	1
*Professor	2	5	7
*Associate Professor	1	4	5
Assistant Professor	1	2	3
Special Lecturer	1	5	6
Adjunct Instructor	14	39	53
Research Professor		3	3
*Total	19	59	78

Based on Fall 2004

*One Vacancy

5. Research Agenda

- Reorganization of Center for Architecture and Building Science Research.
- Five major areas: Disabilities Planning, Educational Facilities, Health and Aging, Preservation, Housing.
- Important resource for State economic development (e.g. High Performance Schools for S.C.C. and Housing Advisor).

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Center for Architecture and Building Science and Research

Growth In Research Volume

CABSR GRANTS AND CONTRACTS	2000	2001	2002	2003	2004	Total
Developmental Disabilities Planning	265,000	284,708	284,708	423,165	561,622	1,819,203
Educational Facilities	0	0	0	100,000	500,000	600,000
Health and Aging Environments	245,000	240,772	240,917	119,269	200,000	1,045,958
Historic Preservation	115,000	409,500	758,377	754,360	350,000	2,387,237
Housing and Community Development	180,000	91,000	55,249	157,000	150,000	633,249
Total	805,000	1,025,980	1,339,251	1,553,794	1,761,622	6,485,647

Center for Architecture and Building Science Research

Projected Research Volume Targets

	2005	2006	2007	2008
Total	1,750,000	2,000,000	2,250,000	2,500,000

6. New Program in Industrial Design

- Curriculum based on real life projects.
- Innovation and development of intellectual property and proprietary design.
- 4 year undergraduate program sharing first year with architecture students.
- Extensive use of FAB LAB and Architecture workshop.

Initiatives Funded by the University's Strategic Plan:

- Redefinition of NJSOA foci:
    - *From CAD to CAD/CAM*
    - *Design of Communities*
- Development of totally new curriculum for both graduate and undergraduate programs in Architecture.
- Establishment of FAB (Fabrication LAB).
- Hiring of New faculty.
- Development of new program in Industrial Design.

Unfunded Initiatives:

- New Program in Industrial Design.
- Technical infrastructure improvements.
- Electronic storage capacity for all student work.
- Planning of additional programs in Landscape and Interior Design.

Opportunities and Challenges:

- Raising the School's national research profile.
- Becoming a player in the national debate on the future of the architecture profession/education.
- New hiring.
- Building of management capacity.
- Transition planning (5-10 year time horizon).
- Growth of School requires either more space or drastic reduction in student intake
- Transition from an upstart School to one of the established benchmarks.