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Strategic Plan for the Department of Chemistry and Biochemistry

The Department of Chemistry and Biochemistry at Brigham Young University has established a strategic framework designed to fulfill the university's divine mission: to assist individuals in their quest for perfection and eternal life. This plan seeks to advance excellence in the chemical sciences while nurturing faith, character, and lifelong discipleship among students. It outlines the department's goals, initiatives, and operational priorities in harmony with the Aims of a BYU Education.

Department's Core Strategic Goals

The Department has identified three primary focus areas to guide its operations and development, each aligned with the priorities of the College of Computational, Mathematical, and Physical Sciences and complement the Aims of a BYU education:

1. **Excellence in Classroom Education**
2. **Excellence in Experiential Learning**
3. **Excellence in Advising, Mentoring, and Networking**

To support these areas, the department emphasizes four foundational activities:

- **Faculty Excellence:** Recruit, develop, and retain outstanding faculty who embrace BYU's mission and exemplify the highest academic and spiritual standards.
- **Educational Quality:** Deliver engaging, rigorous instruction that integrates secular learning with spiritual growth, fostering faith, intellect, and character.
- **Research Engagement:** Provide students with opportunities to participate in impactful scientific research, illuminated by the "light and color" of the restored gospel of Jesus Christ.
- **Infrastructure Development:** Build a sustainable framework for maintaining and advancing research and teaching instrumentation.

Supporting the Strategic Plan**Faculty Excellence**

The Department upholds a comprehensive Faculty Hiring Plan designed to maintain a pool of highly qualified applicants who are committed to BYU's unique dual focus on academic rigor and spiritual development. This plan outlines methods for enhancing candidate outreach, clearly defining position needs, and conducting thorough online and

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in-person evaluations to identify those best prepared to inspire students both intellectually and spiritually.

Educational Quality

Achieving educational excellence at BYU requires a deliberate fusion of rigorous academic instruction and the cultivation of faith, integrity, and spiritual resilience. Effective teaching extends beyond the mere transmission of knowledge; it must also ignite curiosity, foster critical thinking, and encourage moral reasoning rooted in gospel principles.

Faculty are expected to employ hands-on learning experiences, real-world applications, and interactive discussions to engage students deeply in the learning process. Simultaneously, courses should invite the Spirit, affirm divine truths, and help students see the hand of God in scientific discovery.

By preparing students both intellectually and spiritually, the department aims to graduate individuals who not only excel in their professions but also embody Christlike leadership and service in their communities. To support this mission, the department conducts regular peer evaluations and systematically assesses both program- and course-level learning outcomes, ensuring alignment with national standards and the Aims of a BYU education.

Research Engagement

The Department of Chemistry and Biochemistry integrates faith with scientific discovery, offering students opportunities to engage in impactful research guided by gospel-centered mentorship. Key initiatives include:

1. **Faith-Integrated Curriculum:** Courses explicitly connect scientific inquiry with gospel truths, and the role of faith in scientific discovery will help students see how chemistry and biochemistry align with gospel principles.
2. **Mentored Research with Purpose:** Students participate in faculty-led, externally funded research projects that address pressing global challenges, encouraging them to see their scientific work as a means of fulfilling their covenants to serve and uplift others.
3. **Service-Learning and Outreach:** Outreach initiatives, including education for communities and global humanitarian efforts, enable students to apply their scientific knowledge in ways that reflect the Savior's love and compassion.

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4. **Character Development Through Science:** Research experiences are deliberately structured to cultivate Christlike attributes, such as integrity, perseverance, humility, and charity alongside technical expertise.

Through these efforts, the department nurtures students to become not only skilled scientists but also disciples of Jesus Christ who use their knowledge to bless the world.

Infrastructure Development

A thriving research and teaching environment requires sustainable and carefully managed resources. To ensure the longevity and effectiveness of its scientific infrastructure, the department implements the following strategies:

1. **Instrument Cost Centers:** User fees collected from research grants, external collaborations, and departmental funds provide a sustainable source of funding for instrument maintenance, repair, and replacement.
2. **Dedicated Maintenance and Service Plans:** Regular servicing agreements and skilled in-house technical support extend the life and functionality of critical research equipment.
3. **Grant and Institutional Funding:** Active pursuit of external grants, industry partnerships, and university funding supports major instrumentation acquisitions and technology upgrades.
4. **Strategic Equipment Rotation and Upgrading:** Careful prioritization based on instrument usage, technological advancements, and evolving research needs ensures access to cutting-edge scientific tools.

These strategies enable the department to sustain an active research environment that supports both academic inquiry and faith-centered learning.

Conclusion

The Department of Chemistry and Biochemistry at BYU has established a clear and spiritually grounded strategic plan centered on four core goals: faculty excellence, educational quality, research engagement, and infrastructure development. By investing in faculty, facilities, research opportunities, and student mentoring, the department effectively advances both the academic and spiritual mission of BYU.

Through this strategic framework, the department has achieved notable research productivity, including a high volume of student-authored publications and millions of dollars in external research funding. More importantly, it prepares students to lead lives

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of faith, service, and professional excellence, contributing meaningfully to the advancement of chemical knowledge and to the building of the Lord's kingdom on earth.